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CRIME PREVENTION AND URBAN SAFETY
IN RESIDENTIAL ENVIRONMENTS

Final Report

Rick Linden
and
Prairie Research
Associates Inc.

March 16, 1990

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Prepared by:

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EXECUTIVE SUMMARY

This report reviews and assesses the results of crime prevention activities which are directed toward housing and residential environments. The different types of programs discussed include:

* Neighbourhood Programs - Neighbourhood Watch, Operation Identification, media campaigns, Crimestoppers, and citizen patrols.
* Crime Prevention Through Environmental Design - target, hardening and defensible space.
* Police Programs - preventive patrol, foot patrol, community policing, and private policing.
* Fear Reduction Strategies
* Social Development Programs - parenting, education, employment, neighbourhood programs, and coordinated government programs.
* Strategies for Crime Prevention in Public Housing.

NEIGHBOURHOOD PROGRAMS

A common theme in crime prevention is the developing and strengthening of community institutions as a means of reducing crime (Hope and Shaw, 1988). Social institutions complement and mutually reinforce the operation of the formal institutions of the state in the regulation and prevention of criminal behaviour.

Throughout the crime prevention literature runs the dual emphasis on the "situational" and the "social" control of crime. The situational approach emphasizes target hardening and opportunity reduction, while the social approach seeks to address the offender and victim and effect reconciliation within the community as well as individual change. The first section of this report explores the effectiveness of community approaches to crime prevention.

The most common community strategies are those designed to encourage residents to watch over their neighbourhood and to report crimes or suspicious activity. Program names like 'Neighbourhood Watch', 'Block Watch', or 'Crime Alert' suggest the theme of community responsibility. Neighbourhood groups are organized to increase surveillance through watching each other's homes, patrolling the streets, or disguising opportunity through making homes of vacationing residents appear occupied by collecting the mail, trimming the lawn, or filling the garbage bins. An attempt is made to reduce opportunity in ways in which an individual, acting alone, could not.

Community meetings are held in which residents are presented with target-hardening and property-marking advice which can be used as individual strategies along with community involvement. It is at meetings such as these where the disadvantages of isolated individual protective measures can be overcome. Citizens can also be made aware of the nature of police patrol and investigative limitations and recognize their role in preventing crime. In general, citizens can be educated as to their social responsibilities concerning crime prevention and reporting.

The direct goal of these surveillance programs is the reduction of crime through the deterrent effect of increasing the guardianship of property. If a potential criminal knows there is a likelihood of being seen and reported, he should be less likely to commit an offense for fear of being caught and punished. A second goal of many of these programs is to enhance residents' feelings of community which should foster a general sense of social responsibility. While individual strategies can be isolating, collective strategies are intended to generate a sense of community. The evidence concerning the success of these programs is rather mixed.

Neighbourhood Watch programs are probably the most common community crime prevention measure in North America. Virtually all cities have established programs and there are millions of households involved. Despite their popularity, the evidence concerning the success of these programs is rather mixed. While many studies have shown positive results, evaluators such as Rosenbaum (1988b) have pointed out that the more rigorous the evaluation, the less likely a program is to show success. That is, where a methodologically sophisticated evaluation has been done, the results are not likely to be positive. In his extensive review of the crime prevention literature, Rosenbaum was able to find only four large-scale quasi-experimental evaluations of Neighbourhood Watch. These were conducted in Seattle, Chicago, Minneapolis, and London, England. Of these, only the Seattle project and one of four neighbourhoods in the Chicago experiment showed statistically significant declines in burglary rates. Several Canadian and British programs have also shown been successful.

Typically, Watch programs are not properly organized or maintained. Where a high level of effort is used, these programs can be successful. However, they may be more effective in neighbourhoods that are already well-organized and homogeneous than in the disorganized, heterogeneous areas where crime is likely to be highest.

The second most common crime prevention program is probably Operation Identification. This program, which involves marking property, is also typically unsuccessful in reducing crime. The report discusses a number of successful marking projects. These programs have much higher than normal participation rates, and may involve other crime prevention behaviors in addition to property marking.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

The use of physical and environmental design to control crime is not new. Fences, locks and surveillance have always been used to protect people and property (Gold, 1970). However, interest has grown in the post-World War II period in understanding the relationships between physical design and levels of criminal activity, and then to manipulating design to reduce the incidence of crime. This section of the report reviews the relationships between physical design and crime [or Crime Prevention Through Environmental Design (CPTED)] and evaluates what is known about the effectiveness of altering the physical layout and attributes of buildings and neighbourhoods to reduce criminal activity and the fear of crime.

Reliability and validity problems continue to beset the testing of both target hardening and defensible space propositions. Until the basic concepts underlying CPTED are operationalized and until reliability and validity testing produces useful measures, there will be little progress in verifying the claims made that the changes in the physical environment and management of housing will lead to a reduction of social problems.

The present state of CPTED is easy to describe. Design principles have become more specific, and empirical work can best be described as preliminary. However, there is little systematic guidance for deciding which specific approach is best. Some proponents such as Coleman vigorously support the defensible space and target hardening approaches. Other researchers stress the need for strong community organization and tenant councils to reduce crime and other social malaise. Each side to the debate can justify their position with many case studies.

A reasonable middle position might be to accept that both approaches are needed for a successful conclusion, but this is not satisfactory. What specific target hardening works best? By how much does increased surveillance reduce crime rates? When is a tenants committee essential for success? Is there a threshold below which any changes have no effect and above which changes have diminishing returns? These entirely reasonable questions cannot be answered. There are simply too many combinations of physical and social conditions and each building and neighbourhood requires independent review. The principles of CPTED are a reasonable starting point, but the evidence is clear that crime cannot be reduced by design alone. Mayhew (1979) cites evidence suggesting that demographic factors such as the ratio of children/adults and the number of offenders living in the immediate area may be more important determinants of crime than design. Tenant involvement is also crucial in dealing with crime in multiple-family housing. Pride in residence and feelings of ownership and control are critical factors -- involving residents in that process and using sound management are also essential preconditions for success.

An important lesson from this chapter is that stand-alone strategies are not sufficient. The successes of the Portland and Hartford programs show that changes in the physical environment, in police activity, and in citizen involvement together increase the likelihood of program success.

POLICE PROGRAMS

During the 1970s and 1980s, researchers began to challenge police strategies. The Kansas City Patrol experiment suggested that random preventive patrol did little to prevent crime or to reduce fear of crime. A subsequent study in Kansas City questioned the value of rapid response for most calls and the Rand Detective Study found weaknesses in investigative procedures.

What have the police done in response to this research? Some departments experimented with innovative patrol tactics such as address-oriented patrol which focused on locations with a pattern of repeated complaints. This was based on crime analysis, a process of looking for patterns which might provide clues for solving crime and preventing future occurrences. While these programs did show that patrol activities could be directed more efficiently, the results showed no substantial improvement in controlling crime (Gay, Beall, and Bowers, 1984).

Crime analysis has also led to other programs including offender-oriented strategies such as VICAP (Violent Criminal Apprehension Program) and SHOCAP (Serious Habitual Offender Comprehensive Action Program). The latter program identifies and targets juveniles with lengthy records of serious crime. Again, these programs have been effective in targeting on specific offenders, but their impact on overall crime rates has not been demonstrated.

Other innovations such as call screening and differential response, which involve delaying dispatch to calls which are not urgent or even taking reports over the phone rather than in person, also are directed toward efficiency rather than toward control of crime. The same is true of case screening procedures which enable detectives to concentrate their efforts on cases which have a high likelihood of being solved.

These innovations have been necessary in order to free up police resources to implement programs which more directly address the prevention of crime and the reduction of the fear of crime. The most important of these involve strategies to get closer to the community. During the 1960's and 70's some attempts were made in this direction as it became apparent that in order to improve their effectiveness the police had to use the resources which were available in the community. However, this involvement was typically limited to the establishment of community relations units and to the inclusion of sensitizing material dealing with racial and ethnic minorities on training courses. While these programs were a start, they were not very successful because they did not address the underlying issue of the relationships between line officers and the community. Many community relations programs also involved "doing something to" the community, rather than "working with" the community in any meaningful sense. In order to really develop police-community relations it is necessary to make fundamental changes in the way in which the police are trained and organized, and in the strategies and tactics which they use.

The beginning of a transition toward more meaningful community-oriented policing began with several evaluations of the impact of foot patrol in high-crime areas. The best-known of these was carried out in Newark, New Jersey, and involved a comparison of patrol areas in which officers were assigned to foot patrol with those where patrolling was done by automobile (Police Foundation, 1981; Pate, 1986). The two major findings of the study were rather interesting, as they were somewhat contradictory. Crime rates, as measured both by reported crimes and a victimization survey, did not differ by type of patrol. However, residents in beats where foot patrol was added felt that crime problems had been reduced and that neighbourhood safety had improved.

One strategy for putting the police back in touch with the community is to walk around the neighbourhood and meet citizens. Another is the use of mini-stations or storefront offices where members of the public can walk in and visit the police. An evaluation of these stations has been done in Houston by Skogan and Wycoff (1986), who concluded that the program had a positive impact on reducing the residents' fear of crime and improving their attitudes toward the police as well as their perceptions of the neighbourhood.

The foot patrol project which was implemented in Flint, Michigan represents a combination of the foot patrol and mini-station approaches. (Trojanowicz et al, 1983; Trojanowicz and Bucqueroux, 1990). With the assistance of a $2.6-million grant from the Mott Foundation, the Flint Police Department put foot patrol officers in 14 neighbourhoods into local offices (many in schools) where they were accessible to the community. While the officers were called foot patrol officers, their mandate was not just to walk the streets hoping to deter crime through their presence, but rather to focus on crime prevention and the provision of services to community residents. As Trojanowicz has described the role of community officers, "Because foot patrol officers make face-to-face contact with the public, they are able to act as community organizers, dispute mediators, service brokers, and links between the community and local social service agencies" (1986:177). This program represented a large step toward a complete program of community-based policing.

The evaluation of the project showed that many of the program goals were met. Between 1978 and 1981 crime rates declined by 8.7% while they increased in the rest of the city. The real impact of the program may have been greater, as crime rates for the first two years of the program were around 20% lower. However, in the third year the size of the patrol areas was expanded and in one case an area was increased to 20 times its original size. Crime rates rose sharply following this increase.

Calls for service also declined dramatically as a result of the project, apparently because people took minor complaints to their community officer rather than phoning the police station. Citizen surveys indicated that residents felt foot patrol had reduced crime in their areas and they felt safer as a result. While this program was eventually terminated because of a lack of resources, in many respects it was highly successful and has been a model for a number of other programs including one in Edmonton.

In addition to Edmonton, many Canadian cities have implemented community policing programs. These include Halifax, Victoria, Calgary, Winnipeg, and Toronto. Unfortunately, evaluations of these programs have not yet been completed so their impact on crime cannot be determined. However, it does seem clear from the research which has been done that a cooperative effort between the police and the community offers the best hope for a reduction in crime.

A final variation of community-based policing is the assignment of police officers to a community office located in a public housing project. Traditional policing does not address the needs of public housing projects. The police typically patrol in cars, which don't go into the high-rises and town house complexes that make up public housing. Most of what goes on in the housing projects is not visible from the streets. Several Canadian communities have established offices in housing projects. One of the five community offices in Victoria is in a housing unit. In Windsor, officers have also moved into a project which they patrol on bicycle. Unfortunately, the evaluation of the Victoria program is still in progress and no evaluation was done in Windsor, but evaluations of similar programs in Burlington, Fredericton, and Sudbury have shown some success.

SOCIAL DEVELOPMENT PROGRAMS

The crime prevention strategies we have considered thus far are consistent with the routine activities approach to crime Cohen and Felson, 1979). This approach suggests that three factors are required for a crime to occur: a motivated offender; a suitable target; and a lack of effective guardians. Most of the work in crime prevention has focused on improving guardianship and making potential targets less attractive. Programs such as Neighbourhood Watch and designing defensible space are intended to improve guardianship, while target hardening and Operation Identification are intended to make potential targets less accessible or less attractive. However, in the long run the problems of poverty, racism, and illiteracy must be addressed if we are to achieve lasting reductions in crime. If these social conditions continue to produce a pool of motivated offenders the problem of crime will continue despite efforts at prevention. Also, many of the defensive strategies, particularly those involving target hardening, may isolate members of a community from one another, as those who can afford it barricade themselves in locked apartments with security systems in buildings guarded by doormen and policed by private security guards. The streets will be left to the poor, some of whom will prey upon the others.

There are several other reasons why strategies which do not deal with the underlying causes of crime are not adequate. First, even when the strategies described in earlier sections of this report are effective, they often result in some displacement to other parts of the community. Second, most crime prevention programs are targeted at property crimes and do not address the serious problem of interpersonal violence. Third, in some high-crime areas there is little reason to trust one's fellow residents since they may be the very people causing part of the crime problem. Increasing the neighbour's ability to watch your property is a dubious achievement if the neighbour is the person who is going to try to steal your possessions. Finally, we have seen that the prevention of crime is very difficult - programs are often hard to implement and even harder to maintain. This is particularly the case in disorganized communities with high crime rates. It is by no means a sure thing that organizing neighbours, or marking property, or altering housing design will be successful, so there is a need for means of reducing the number of potential offenders.

Social development programs are directed at reducing the pool of motivated offenders by altering the conditions that breed crime. For example, improved school programs and job opportunities may reduce a youth's motivation to get involved in delinquency. While evidence on the effectiveness of the social development approach is rather limited, in this section we will look at some different social development programs including those focusing on employment, parenting, neighbourhood improvement, and education. While the lack of research on the effectiveness of the social development approach means that many of our conclusions are speculative, the importance of trying to deal with crime and delinquency at its source justifies any efforts which can be made in this direction.

The need for programs focusing on potential offenders has been shown by the research which has been done on chronic offenders. Wolfgang, Figlio, and Sellin (1972) showed that a small proportion of offenders committed large numbers of offenses. Six percent of the males in their Philadelphia cohort committed 52 percent of all recorded juvenile offenses. They contributed to an even greater proportion of serious crimes including 71 percent of homicides, 82 percent of robberies, and 73 percent of rapes. This finding has been replicated in a number of studies using both official and self-reported occurrence data (Farrington, 1987).

Many of the social factors correlated with high rate offending are those associated with deprivation and disadvantage. Among these were poor child-rearing and supervision; antisocial parents and siblings; low family income; and school failure (Farrington, 1987). Thus children who come from homes where discipline is inconsistent and erratic; where parents do not care for them; where parents themselves may have problems with drugs and crime; where parents are poor and unemployed; and who do not achieve at school make up the group of individuals who are most likely to be potential offenders. Thus social development programs are targeted at areas such as parenting, education, and employment.

The evidence supporting the social development approach to crime prevention is quite sketchy. These programs are difficult to implement because they typically require the involvement of many different organizations. Also, it is much harder to get funding to support long-term programs since governments and private funding organizations prefer short-term projects. Because of the lengths of time involved, evaluation is also difficult as many factors other than the planned intervention could affect the results. The small number of participants in many of the programs and the lack of adequate control or comparison groups also makes it difficult to come to any strong conclusions about the efficacy of these programs. However, the evidence presented in this chapter does lend support to the view that the social development approach can be effective in reducing crime. However, a great deal of organization is required in order for these programs to be successful.

One of the keys to the social development approach is the involvement of many different agencies. This means that activities will have to be coordinated by a central agency, probably by government. In addition to the need for coordination, there are many functions that can only be carried out by the federal and provincial governments. These include such things as economic development, making the educational system more responsive to the needs of the poor, setting minimum wage levels, and providing safe, secure, and affordable housing. However, it is perhaps paradoxical that despite the need for government involvement and coordination, the involvement of the community is also crucial if prevention efforts are to be successful. This means that the role of government should be to coordinate rather than to control. Structures must be put in place which provide encouragement, resources and information to local groups which would be responsible for the planning and implementation of programs. Those who will be affected by programs must also be involved in the planning and implementation process. As in other types of crime prevention, the great diversity of problems and the uniqueness of each community means that "one size fits all" programs will not work.

This approach to crime prevention is more typical of Europe than of North America. For example, the final declaration of the 1987 Barcelona Conference on the Reduction of Urban Insecurity which was sponsored by the Council of Europe had as the first of its six themes the linkage between crime and the deterioration of neighbourhoods and the concomitant problems of family breakdown; loss of feelings of community; lack of community facilities; school problems; racial and ethnic intolerance; youth unemployment; and the lack of involvement of tenants in housing. Chapter 5 of the report discusses a number of European programs which follow this approach.

What are the implications for Canada of the European experience? First, because of the need for a cooperative effort, it will be necessary for the federal government to take a lead role in crime prevention. While it would be possible for a province or even a municipality to work on its own, the impact would be less without federal cooperation. An inter-ministry federal council, mandated to work with the provinces could develop and coordinate policies, and could provide both information and funding to support crime prevention. This council could monitor crime prevention initiatives among federal departments, provide contract funding to provincial and municipal governments, and could support model projects. A similar provincial body could act as a liaison between federal and municipal governments. Municipal crime prevention councils would involve local governments and those like police, social agencies, and school boards who are directly involved in service delivery. This structure would link all those who have a role in crime prevention activities.

At each of these levels, some emphasis should be placed on the involvement of the private sector. Given the important of jobs in reducing economic inequality, private sector employers must be involved. There are many other roles for those outside government. Apartment owners and other business people must be involved in target hardening and environmental design programs. Crime reduction carries with it economic benefits such as higher property values, so it is not unrealistic to expect some support from private funders.

It is also important to emphasize the need for the involvement of local communities in defining problems, determining strategies, and implementing programs. In his review of different approaches to crime reduction Currie concludes that "the most effective ...programs are decentralized, involve the participation of local people, and link their clients to other community institutions" (1985:256). Thus a structure which allows for central direction, coordination, technical assistance, and funding but which gives control over programs to the local community is the most likely to succeed.

It should be noted that sound, large-scale evaluations have not been done of the European approach to crime prevention, so it is not possible to say with a high degree of certainty that this structure will reduce crime though the evidence does suggest it has had an impact. However, if the goal of preventing crime through social development is to be seriously pursued, a coordinated national effort is essential. Without such an effort it is certain that programs will be developed on an ad hoc basis and will be limited in their impact and their effectiveness.

FEAR OF CRIME

Chapter 6 presents a review of the research literature on the fear of crime and attempts to reduce fear. This research shows that particular demographic characteristics are associated with the fear of crime. Less conclusively, research has also demonstrated that factors in the social, physical and built environment as well as prior victimization affect the level of fear of crime in varying degrees.

In addition, this section presented a review of some of the demonstration projects and programs in Canada, United States and Europe which have attempted to reduce the fear of crime. The absence of evaluation research combined with the methodological problems associated with program evaluations which have been conducted, does not allow us to provide a conclusive or definitive statement on what works or what doesn't work in reducing the fear of crime.

The research addressing this issue is fragmented in that studies do not often examine the fear of crime from a similar perspective using similar populations and measures. Further, some studies and evaluations have not adhered to sound methodological principles which raises issues regarding the reliability and validity of the findings.

CRIME IN PUBLIC HOUSING

The final chapter deals with crime in public housing. The crime prevention methods we have described earlier all have relevance to public housing. However, there are a number of reasons why public housing is discussed in a separate chapter. These include the demographic characteristics of residents. While profiles of public housing residents can vary widely, some generalizations can be made. By its very nature public housing represents a concentration of people who are at or near the bottom of the economic ladder.

Virtually no information is available in Canada concerning crime in public housing. One study by Waller and Okihiro (1978) found that proximity to public housing was one of the strongest correlates of burglary rates; though the source of this crime was not identified. Research from other countries has shown that some public housing projects have had high crime rates (Brill, 1977, 1980; Rock, 1988). This is particularly true in some American and European cities where well-intentioned urban renewal programs led to a concentration of public housing projects, sometimes with tens of thousands of residents, in inner-city neighbourhoods. Lynn Curtis has succinctly described the problem: "Although there are many exceptions, it also is true that many American public housing projects condense into a small area the American dilemmas of race and poverty - together with all of the impotence, indifference, and hostility associated with them" (1982:441).

We have generally avoided such concentrations in Canada, though there are exceptions such as the Jane-Finch area of Toronto, but even smaller projects may be vulnerable to crime. While the rates of crime may not be any higher in public housing than in similar private housing public housing merits special concern because it is publicly-owned and managed. This places some responsibility on housing agencies to ensure that their tenants are safe and secure.

Unfortunately, many of the traditional crime prevention strategies are not effective in public housing. This is particularly true of community-based strategies such as Neighbourhood Watch. Often those who support the laudable goal of involving the community in crime prevention activities design programs which take more effort than members of the community are prepared to give. Turning responsibility for crime control back to the community may not work if those residents are too frightened, disorganized, or overburdened with problems to participate. Also, as renters, the tenants of public housing projects have less of an incentive to improve their communities. Cooperation is also less likely in areas that do not have a homogeneous population (Skogan, 1989) as common values are important in creating community. Brill (1977b) has carried out surveys indicating that values are not widely shared and that a high proportion of residents have no close friends in the project.

This chapter reviews research which has been done on crime in public housing in other countries, most notably Britain where much of the work has been done. Several British programs are described, including the Priority Estates Project, the NACRO (National Association for the Care and Resettlement of Offenders) initiatives, and a very successful project on the Kirkholt estate. Following an analysis of the nature of the crime problem on the estate, this project involved the replacement of pre-payment gas meters, security upgrading, and the employment of a number of community workers to assist in the implementation of several different programs including Neighbourhood Watch. The program resulted in significant declines in burglary and reductions in several other types of crime. French initiatives in public housing are also discussed.

What can be learned from these international experiences? The answer appears to lie in establishing programs of coordinated security planning for public housing projects. Simple solutions will not be successful in projects which have multiple problems. The need for integrated planning has been recognized for a number of years. For example, in their review of crime reduction strategies for public housing in 1978, Rouse and Rubenstein discuss the following integrated approaches: defensible space, comprehensive security planning, turf reclamation, and CPTED. While all of these involve some combination of physical and social strategies, they not nearly as far-reaching as those utilized in Europe.

Based on the work we have reviewed in this report, we have identified a number of areas which can be part of a coordinated approach to crime prevention. In doing this we have not limited ourselves only to strategies which have been demonstrated to be effective but also have included those which we feel have potential. At this point, nobody can claim that a cure for crime in public housing has been discovered, so there is a need to keep experimenting.

There are several difficulties with the approach we propose. It will require major changes in the way public housing is administered and will require that more resources be devoted to the problems of safety and security. Implementing effective programs will require a planning process such as that outlined in the final chapter. Since this process is based on a thorough analysis of the problems, it takes time to work through the planning and implementation stages. Also a multi-faceted program is harder to evaluate, because there is virtually no way of determining which component has the greatest impact on crime. However, since these strategies complement and reinforce one another, isolating the most important component is probably not a realistic expectation. Finally, it isn't likely that the different parts of the program can be introduced at the same time, so considerable thought must be given to which to introduce first.

We discuss seven different categories of responses to the problem of crime in public housing. These correspond to the program areas used by HUD in their examination of this problem (Curtis, 1982). These are:

- improved management of public safety by the public housing authority
- environmental design changes
- tenant organizations
- social development programs
- services to deal with crime and to assist tenants
- enhanced policing
- stronger linkages with other agencies which can assist the program

The combination of responses which are used in any specific instance depends on the situation. Public housing managers must be flexible enough to tailor a response which is based on an analysis of the problem, not on some preconceived notion of what programs should be used. Planners must work inductively from the problem to the solution. This entire effort must be supported by a coordinated effort involving federal, provincial, and municipal governments along with a wide variety of social agencies.

1.0 INTRODUCTION

For much of this century, citizens have placed the primary responsibility for crime prevention in the hands of the formal system of criminal justice. However, in recent years the limitations of this approach have been recognized. Criminal justice professionals, politicians, and members of the community have realized that the patrol and investigative resources of the police are limited in preventing many types of crime and that the courts and prisons also have only a small impact on crime rates. Because of this there has been a greater emphasis on crime prevention programs that involve close cooperation between those working in the criminal justice system, other professionals, business people, and community residents.

1.1 The Proactive Nature of Crime Prevention

Crime prevention, according to one commonly accepted definition, is "the anticipation, recognition and appraisal of a crime risk and the initiation of some action to reduce that risk" (National Crime Prevention Institute, 1978:1-2). This clearly indicates that crime prevention techniques involve a proactive rather than a reactive response to crime and safety. Proactive responses attempt to reduce the possibilities of criminal victimization before it occurs by minimizing criminal opportunity rather than responding after the crime has taken place.

1.2 A Typology of Crime Prevention Responses

In this paper, we will review and assess the results of crime prevention activities which are directed toward housing and residential environments. It is important to remember that there are many other ways of trying to reduce

crime[1]. Petrunik (1982) has developed a typology of crime prevention strategies based on the focus of the program (criminal justice system or community) and on whether the programs are oriented toward the offender or toward the victim. The typology in Figure 1 shows the range of strategies available.

Typology of Crime Prevention Approaches

	Justice System Based	Community Based
Offender Oriented	Incarceration, treatment, probation, parole, etc.	Economic, educational, counselling, etc.
Defensive (Victim) Oriented	Police patrols, investigative strategies	Education, environmental and architectural design, management responses, etc.

Figure 1

This review will focus on strategies which are victim/environment-oriented and community-based and will also consider some police-based defensive strategies. To place these in perspective, the review will begin with an overview of each of the approaches to crime prevention included in the typology.

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[1] There are also many other types of programs directed at crimes which we will not consider here because of the focus on housing and residential environments. These include white collar crime and crimes such as shoplifting and robbery which are directed at businesses.

1.3 Offender-oriented Approaches

1.3.1 Justice System Based

A great deal of research has been focused on offender-oriented approaches to crime prevention. This research has resulted in a wide variety of different programs which have tried to change the behaviours of individual offenders. While the threat of incarceration undoubtedly acts as a deterrent, high recidivism rates suggest that the reformative powers of incarceration are very limited. Considering treatment programs, while some behavioral change is possible for intensive programs targeted at specific groups of offenders (Gendreau and Ross, 1980), success has been very limited. Even if the knowledge and the resource commitment to needed to implement successful treatment programs were available, the approach is limited by two other factors. First, only a small proportion of criminal offence ever result in an offender's conviction by the courts, so the number of offenders available for treatment is limited. Second, these approaches can only be used after an offense has been committed and cannot be directed at potential offenders.

1.3.2 Community Based

There is probably more potential for offender-oriented programs in the community, as these can be directed toward a broader range of people including potential offenders and offenders who have not been processed through the criminal justice system. Grouped together under the term, crime prevention through social development, these programs are not simply targeted at criminal behaviour, but at improving the social environment for those at risk of involvement in crime or delinquency. In their review of these approaches, Waller and Weiler (n.d.) include programs in the areas of employment, social services, social security, education, and health care. In the social development approach to crime prevention, improvements in these areas are intended to change the motivations of offenders and potential offenders. Unfortunately, information on the success of such programs is very limited.

1.4 Victim/Environment Approaches

Attempting to change the motivation of offenders, through legal sanctioning, treatment, or improving the social environment is a lengthy and difficult task. An alternate approach to crime prevention has been to use defensive strategies aimed at the potential target or victim of crime rather than at the potential offender. These approaches potentially hold out the promise for more immediate results than offender-oriented strategies because they involve circumstances that can be changed though action by the government, community, or individual. Physical factors which provide criminal opportunity can be altered so as to reduce those opportunities. Victims and potential victims can be educated concerning ways to avoid contact with offenders.

Approaching the problem of crime from the perspective of the victim and the environment appears to be a more fruitful approach than does an approach which tries to change the motivation of an offender who may not wish to change. However, Stanley (1977) has warned that the danger of the opportunity-oriented approach lies in the fact that it is susceptible to being applied in a 'cookbook' fashion without regard to the limitations of the approach or to the particular needs of the situation to which it is being applied. Further, the use of this approach exclusively ignores the question of how opportunity and motivation are related and the extent to which motivation may be reduced when criminal opportunity is minimized.

1.4.1 Justice System Based

Over the past fifteen years a body of research has accumulated which has raised questions about the effectiveness of traditional policing methods (Schell et al, 1976; Kelling, 1978; Goldstein, 1979; Engstad and Evans, 1980). Studies evaluating the effectiveness of patrol such as the Kansas City Patrol Experiment have suggested that uncommitted patrol time has little impact on crime or fear of crime. Thus random preventive patrol appears to be a poor use of police resources. Also, research has shown that for many types of offenses, rapid response time is not required. Citizens typically take so long to call the police that improving the police response has little impact. Research such as that done by the RAND Corporation has raised questions about the efficiency of detective units and has suggested that too much time is spent on cases which have a very low probability of ever being solved. The cumulative effect of this research has been to lead police administrators and researchers to look for more effective strategies.

This search has led to a new concern with community-based approaches, including a wide variety of community-based policing programs (Greene and Mastrofski, 1988). It has also led to new police-based approaches including directed patrol. The basic concept of directed patrol is that instead of just sending out patrol officers in cars or on foot with no instructions other than to answer calls for service, officers are given specific instructions based on problems which have been identified through crime analysis. Officers may be asked to concentrate on specific addresses (over half of all calls come from 10 percent of a typical city's addresses), locations such as parks, or particular offenders. They may also be directed to carry out community relations and crime prevention activities as part of their duties on a particular shift. Several of these new proactive police strategies in a subsequent report.

1.4.2 Community Based

As we have noted above, one of the factors which has contributed to the increased popularity of community-based preventive efforts has been the realization that police patrol and investigative resources are limited in their ability to prevent most crime. The recognition of the limits of the effectiveness of the criminal justice system in controlling crime has led to the encouragement of the involvement of other agencies, businesses, and the public in crime prevention.

Community-based crime prevention can reduce the opportunity for victimization in several ways:

a. Opportunity can be made more difficult. Potential targets can be made less vulnerable by restricting access and by placing barriers between the offender and the target.

b. Opportunity can be disguised by making the target appear less vulnerable or inviting. For example, an unoccupied home can be made to appear occupied by having neighbours pick up the mail and cut the grass, and by having timers turn on lights and radios while the residents are away.

c. Opportunity can be discouraged through means such as making the target less valuable (marked goods are more difficult to fence) or by making entry more risky (burglar alarms, dogs).

d. Opportunity can be reduced by increasing the potential observability of the criminal act. Well-lit streets and homes or the presence of potential witnesses (as in Neighbourhood Watch programs) increases the offender's chance of being noticed and apprehended.

In this report, we will review the literature on the effectiveness of these different crime prevention techniques. (For details of the review process see Appendix 1). Each of the major approaches to crime prevention will be described and an assessment will be made of their impact on crime and fear of crime. The lessons learned from this review will be applied to the context of public housing.

2.0 NEIGHBOURHOOD PROGRAMS

2.1 Overview

A number of trends for community approaches to crime prevention run through the literature. Some have deep roots in social theory, others are the result of recent revisions to these established models. A common theme is the developing and strengthening of community institutions as a means of reducing crime (Hope and Shaw, 1988). Social institutions complement and mutually reinforce the operation of the formal institutions of the state in the regulation and prevention of criminal behaviour.

Throughout the crime prevention literature runs the dual emphasis on the "situational" and the "social" control of crime. The situational approach emphasizes target hardening and opportunity reduction, while the social approach seeks to address the offender and victim and effect reconciliation within the community as well as individual change. This section explores the effectiveness of community approaches to crime prevention.

2.1.1 Behavioral Reactions to Crime

Individual behavioral strategies for crime prevention would be better described as behavioral reactions to crime. Much of the crime prevention literature rests, implicitly at least, upon a type of environmental determinism. This assumes that the physical changes will produce concomitant behavioral and attitudinal changes in both offender and victim. The desired behavioral changes for victims include efforts to increase potential observability by encouraging citizens to be aware of criminal activity and to report such activity to the police.

A more common behavioral reaction is that of avoidance and taking precautions (Skogan and Maxfield, 1981). Some precautionary measures are recommended as part of a general crime prevention effort. Personal risks can be avoided by limiting exposure to dangerous places, potentially dangerous situations (e.g. hitchhiking), and restricting certain activities (e.g. jogging) to daylight hours. It must be remembered, however, that avoidance and precautions can become extreme and the quality of life can be negatively affected.

An overemphasis on individual crime prevention may result in increased fear and isolation. People living behind locked doors can become captives. Isolation and withdrawal resulting from over-reliance on target hardening is counter-productive in terms of crime prevention. "It ignores the role which people can play in co-operation with their neighbours" (Frisbie, 1977:9). Skogan and Maxfield (1981:225) conceptualize the actions which people take to reduce their own chances of victimization as 'protective' rather than 'preventive' actions. Protective actions are individual, while preventive actions involve the community. Protective actions may reduce the risk for the individual, while fear of crime continues to paralyse a neighbourhood. The benefits of protective actions are private and somewhat precarious. The key to preventive actions lies in the 'community' - something which is more than simply the sum of individual responses to crime. It is through collective effort that the opportunity to accomplish tasks beyond individual abilities is provided.

2.1.2 Collective Strategies

Following our typology of individual versus collective (or community) and physical versus behavioral (or social) strategies, an attempt is made in this section and the one following to discuss crime prevention strategies on the collective level. A collective response to crime is one in which individuals act jointly to undertake crime prevention activities which individuals could not accomplish on their own. Social strategies include programs which encourage residents to watch over their neighbourhood and to report suspicious activities. Public education and awareness campaigns are launched to encourage a sense of citizen concern for the community. Physical strategies include the use of physical design changes to modify the environment such that criminal opportunity is restricted and social control is enhanced. The major thrust in this area has been the CPTED (Crime Prevention Through Environmental Design) concept. The labelling of this approach as a physical strategy is somewhat artificial, as the concept involves the use of physical design changes in concert with social strategies to reduce crime and enhance the quality of life in a community.

2.1.3 The Community Social Strategies

The most common community strategies are those designed to encourage residents to watch over their neighbourhood and to report crimes or suspicious activity. Program names like 'Neighbourhood Watch', 'Block Watch', or 'Crime Alert' suggest the theme of community responsibility. Neighbourhood groups are organized to increase surveillance through watching each other's homes, patrolling the streets, or disguising opportunity through making homes of vacationing residents appear occupied by collecting the mail, trimming the lawn, or filling the garbage bins. An attempt is made to reduce opportunity in ways in which an individual, acting alone, could not.

Community meetings are held in which residents are presented with target-hardening and property-marking advice which can be used as individual strategies along with community involvement. It is at meetings such as these where the disadvantages of isolated individual protective measures can be overcome. Citizens can also be made aware of the nature of police patrol and investigative limitations and recognize their role in preventing crime. In general, citizens can be educated as to their social responsibilities concerning crime prevention and reporting.

An extension of Neighbourhood Watch programs includes the involvement of those who are mobile to increase the surveillance capacity of a community. This program encourages those who have contact with the public on a regular basis to be aware of criminal activity and other dangers or emergencies which may arise. Programs such as this have the potential of reducing feelings of isolation and fear, as well as increasing the potential observability of criminal acts. Newspaper carriers, meter readers, door-to-door sales persons, and city maintenance and sanitation crews can potentially become involved in such programs. The increasing number of cellular phones in automobiles has the potential of increasing this type of mobile watch program even more.

The direct goal of these surveillance programs is the reduction of crime through the deterrent effect of increasing the guardianship of property. If a potential criminal knows there is a likelihood of being seen and reported, he should be less likely to commit an offense for fear of being caught and punished. A second goal of many of these programs is to enhance residents' feelings of community which should foster a general sense of social responsibility. While individual strategies can be isolating, collective strategies are intended to generate a sense of community. The evidence concerning the success of these programs is rather mixed.

2.2 Displacement

There are many methodological criticisms which can be made of research evaluating the effectiveness of crime prevention programs. Lurigio and Rosenbaum (1986) have concluded that:

- Program objectives are often poorly articulated and operationalized.
- Research designs are typically very weak and do not allow for strong inferences to be made.
- Replication is very difficult and seldom done.
- Measurement of outcome variables is often unreliable and statistical analysis is poorly carried out.

In this review of evaluation studies, we are faced with the problem that very little of the research is methodologically sound. While we will discuss the limitations of the work throughout this review, one problem which potentially applies to virtually all of the studies we have reviewed will be discussed here. That is the issue of crime displacement.

One of the criticisms which is sometimes made of crime prevention efforts is that crime is not prevented but is displaced to other targets or victims. Before looking at the different types of crime prevention programs, we will briefly discuss the issue of displacement, as it is a phenomenon which must be considered in looking at their effectiveness. For a complete review of this topic see Gabor (1990). Displacement can take many different forms. Repetto (1976) has identified five types:

* changing the location of the target - if one house is protected by strong locks, the house next door will be chosen
* changing the time - if people are home in the evening, the best time for a burglary might be the daytime
* changing the target - if buses go to an exact change system, cab drivers may be targeted.
* changing tactics - if Neighbourhood Watch has people looking across the street at each other's homes, then it will be safer to enter through the back alley
* change the nature of criminal activities - if armed robberies become too risky, an offender may turn to selling drugs to make money.

There is no doubt that each of these types of displacement occurs. The important question, which must be asked in any evaluation, is whether a prevention program does more than simply move crime around.

Those who feel that crime is merely displaced have received support from a number of different sources. A number of different studies have found that many criminals are not limited to a particular neighbourhood, but are prepared to travel some distance to commit and offense (Repetto, 1974). Other research on the nature of criminal careers has found that there is little specialization in different types of crime (Petersilia, 1980). These studies, and many others not discussed here, indicate that potential offenders are quite adaptable. This suggests that displacement is likely to occur.

On the other hand, there have been a number of studies which have been less pessimistic about the overall impact of crime prevention programs. Examples such as the security measures taken by airlines to prevent hijackings which have resulted in a reduction in the occurrence of these offenses. Also there have been studies such as that of Laycock (1985) which have shown a positive result while carefully controlling for displacement.

The bottom line is that displacement is likely a result of most crime prevention efforts, but that these effects are not inevitable. For instance, amateurs are less likely to turn to another target or type of crime than are professionals. Also, the more comprehensive a program such as Neighbourhood Watch or Operation Identification, the less likely it is that displacement will occur. Finally, it is necessary that each evaluation address this issue, as the likelihood of displacement is quite variable.

2.3 Neighbourhood Watch

Neighbourhood Watch programs are probably the most common community crime prevention measure in North America. Virtually all cities have established programs and there are millions of households involved. Despite their popularity, the evidence concerning the success of these programs is rather mixed. While many studies have shown positive results, evaluators such as Rosenbaum (1988b) have pointed out that the more rigorous the evaluation, the less likely a program is to show success. That is, where a methodologically sophisticated evaluation has been done, the results are not likely to be positive. In his extensive review of the crime prevention literature, Rosenbaum was able to find only four large-scale quasi-experimental evaluations of Neighbourhood Watch. These were conducted in Seattle, Chicago, Minneapolis, and London, England. Of these, only the Seattle project and one of four neighbourhoods in the Chicago experiment showed statistically significant declines in burglary rates.

While it can be argued that Rosenbaum's assessment of Neighbourhood Watch is too critical, his conclusion that "watch-type programs... have been oversold as a stand-alone strategy in the war against crime" (1988:363) is likely correct. In many cases, participation rates are too low to accomplish much more than moving crime from one house to another. In high-crime neighbourhoods the task of increasing informal social control by increasing social interaction through watch programs is very difficult. Just how difficult is shown by a study conducted in Minneapolis by Silloway and McPherson (cited in Rosenbaum, 1988a) which found that even with an average of 25 hours of organizing per block, only one-fifth of households became involved. While organizers spent much more effort in lower-class areas, they had less success getting citizens involved than in other parts of the community. This reflects the unfortunate fact that Neighbourhood Watch is most difficult to implement in areas where it is most needed, and easiest to implement in communities which already have a high degree of informal social control. Residents in high-crime neighbourhoods are often fearful, wary of strangers, and reluctant to get involved with community programs. They are also affected by many other social problems including poverty, poor housing, unemployment, and addiction which make participation in Neighbourhood Watch seem less meaningful than in communities where small amounts of crime are the major social concern. The evaluations discussed by Rosenbaum did not typically show an increase in the intervening factors such as social interaction, surveillance, and stranger recognition which are necessary to make watch programs effective. In these neighbourhoods, watch programs almost certainly must be combined with other initiatives if they are to have an impact on crime.

Even in communities which are less troubled by crime and other social problems, Neighbourhood Watch programs are largely ineffective. This is because they are not properly organized or maintained. The following description of the Seattle experience shows the level of effort which is needed to develop a successful program. Without this level of effort, Neighbourhood Watch is little more than a public relations exercise.

The Seattle Community Crime Prevention Program (Cirel et al, 1977; Mathews 1974, 1976, 1977; Lindsay and McGillis, 1986) began with a survey of residents conducted by the city's Law and Justice Planning Office. This survey found that more citizens were concerned about burglary than any other offence. A follow-up study of the incidence and patterns of burglary in Seattle found that:

1. Over one-third of the reported burglaries were made through unlocked doors and windows. Most entries into locked dwellings were accomplished by force, suggesting that the burglars were relatively unsophisticated.
2. Most victims had not marked their property and only 11 percent of stolen property was recovered.

3. Most burglaries occurred during waking hours, but less than 10 percent were witnessed. The vast majority of burglaries resulting in an arrest or property recovery were witnessed.

4. Most of those arrested for burglary were juveniles.

5. The problem could not be dealt with by traditional police methods.

Federal government funding was obtained to improve burglary investigations and to develop the Community Crime Prevention Program. The Program involved four components:

- residential security inspection services;
- property marking and display of a warning decal;
- organization of Block Watch groups;
- educational activities to inform citizens about prevention.

The city hired ten full-time civilian organizers to implement the program. The directors of the project carried out a crime analysis of the city in order to determine which areas would be targeted. This was done in order to ensure that resources would be used where they were needed the most. Once the program had been implemented, several interim evaluations were carried out. In one of these it was found that interest and motivation diminished after a few months, and that the numbers of participants were reduced because of the turnover of residents. In response, the program directors then developed a maintenance component as a 'booster shot' to repeat and reinforce the original contact of the block captains at regular intervals. A number of the project staff were assigned to this maintenance work.

Careful planning and detailed evaluation permitted the Seattle project organizers not only to successfully meet their primary goals of significantly reducing the rate of burglary (after one year, by 61 percent in participating residences) and increasing the reporting of burglaries in progress, but also to improve project services at various stages of their implementation, to assess the impact of the project, and to indicate changes for the future.

A Neighbourhood Watch Program in Thunder Bay (Worrell, 1983) demonstrated similar success. There was a 68 percent reduction in residential property crime and household yard theft as measured by victimization surveys before and after the program. The survey also indicated that over the evaluation period, residents in the program area had increased their level of security and that they had taken more security precautions than residents of a control area. Results indicated that the willingness of residents to assume an active role in reducing the occurrence of neighbourhood property crime was dependent upon exposure to the program.

Participants perceived a higher degree of social cohesion arising from the Program, they recognized the police as their "partners" and they took a proactive approach to deal with the threat of crime.

Another Canadian study, conducted by Roy (1985) in Winnipeg also showed that a Neighbourhood Watch program was associated with a reduction in crime rates. This program was implemented in a community of almost 1000 homes and had a participation rate of 72.4%. In the year following the program, burglaries were reduced by 30.4% and property damage by 42.9%. Reports to the police of suspicious activity increased by 67.9%. This compares with city-wide declines of 2.8% for both burglary and property damage.

The apparent success of this project is somewhat tempered by the fact that burglaries in a control area increased by 46.6% and property damage by 136.8%. Since the control area was next to the test area, this suggests there was a rather massive displacement effect.

This lack of consistency can also been seen in several studies done in Great Britain. The first of these is an evaluation of two Neighbourhood Watch programs in London (Bennett, 1988). There were positive changes in residents' perception of their quality of life (public attitudes and social cohesion), but there was no decrease in crime. In fact, results showed that crime increased slightly and remained constant or decreased in the displacement and control areas. A more successful British program, the Kirkholt Project (Forrester et al, 1988), was a demonstration project aimed at reducing residential burglary in an authority housing estate. The area chosen had a high rate of crime, especially domestic burglary, and the site had the advantage of well-defined boundaries. While this program will be discussed in detail in Chapter 7, one of the elements was Neighbourhood Watch. The results of the program showed a decline in burglaries of 53%. However, the program involved a number of components and it is not possible to determine what proportion of the reduction was due to Neighbourhood Watch.

An evaluation of an Apartment Watch program was carried out in Ottawa by Meredith (1988). An Apartment Task Force was set up to identify ways to reduce crime in high-rise apartments. Because there is a high degree of anonymity in high-rise buildings, they have traditionally been difficult environment in which to establish community based crime prevention. Strategies included an Apartment Watch Program and improved physical security. Findings indicated that tenant awareness of Operation Identification and Apartment Watch was high (80 - 90 percent), but participation was low. They also found the program succeeded in raising the awareness of tenant that crime was occurring in their building. There was a reduction of 80 percent in break and enters reported to police. However, the most common offence at the project site involved break-ins and damage to cars, and there was no change in the frequency of these crimes. The project is considered "a modest success" What the organizers learned, echoed the findings from the Seattle experience. For example, they found that maintenance activities and proper training for coordinators are essential to the success of the project.

2.4 Operation Identification

One physical strategy which has received considerable attention is that of property marking. Property marking programs involve the use of engravers to permanently identify transportable property. Participants use an identifying number which allows the police to trace the owner. Social insurance numbers or driver's licence numbers are commonly used although some programs use unique numbers. Numbers are filed in a central police registry. In addition to marking their property, participants are issued warning decals which alert the burglar to the fact that items have been marked for police identification.

Similar programs exist for commercial establishments, cottages, marinas, and construction sites (Lynch et al, 1977).

The program is based on the assumption that burglars will perceive a greater risk of being caught if they are in possession of marked items. Second, marked items will be more difficult to fence and will thus be perceived as a less desirable target. Finally, once police have recovered goods, they can be more easily identified and returned to the owner. The use of the decal is recommended since property marking alone will not alert the burglar to the fact that the property is marked until the burglar is already inside. Even then, if the markings are inconspicuous (as they usually are - few people want to deface their own property by scratching large numbers on the surfaces which are visible) and the setting is dark, the burglar may not discover the markings until after the items have been stolen.

Like other direct and indirect target hardening programs, if the benefit of property marking accrues mainly to participants, then collective benefits can only be attained through high levels of involvement. However, involvement in property marking programs is typically quite low (Green et al, 1979; Riopelle et al, 1980). Krajick (1979) reports that only ten of the 65 projects surveyed by L.E.A.A. in 1975 had enroled more than 10 percent of the households in their jurisdictions. In addition, very few of those who mark their property display warning decals. With low participation, it is much more likely that displacement from participants to non-participants will occur. Even in areas where high participation is reached (Meuser, 1976), it appears that some 'tactical' displacement may be taking place as evidenced by an increase in thefts from cars, garages, and sheds, and a tendency to steal money or unmarked items such as jewellery or watches. A number of evaluations which report that no displacement has taken place (Meuser, 1976; Zaharchuk and Lynch, 1977) focus on geographic displacement between communities rather than tactical or local displacement from participants to non-participants within communities. Overall, even if the program is effective, it is highly unlikely that city or province-wide rates of burglary will be affected because of the low participation rates.

A further difficulty with property marking programs involves the recoverability of marked items. In an evaluation of an identification program in Wisconsin (Riopelle et al, 1980), it was found that engraving had not improved the recoverability of stolen items. Green et al (1979) report that burglars do not have difficulty disposing of marked goods. Furthermore, they commonly steal money or items that are not easily marked (Krajick, 1979). Hayes et al (1978) argue that if there is any deterrent effect it is more likely due to the presence of a warning sticker and not to the fact that the items have actually been marked. Marked items are less likely to be recovered if they are transported out of the program area, especially if only local records of user numbers are kept. Property is less likely to be recovered if it is kept for private use or sold informally among friends. Finally, if a burglar does steal marked goods and cannot dispose of them profitably, the items are more likely to be destroyed or discarded than returned to the owner.

Some evidence suggests that participants in property-marking programs generally have lower risks of victimization and better attitudes towards household protection than non-participants (White et al, 1975; Hayes et al, 1978). Thus, the discovery of lower burglary rates among program participants may be due to a self-selection process. Perhaps the program attracts people who are more conscientious about crime prevention to begin with. It seems likely that people who go to the trouble of marking their household effects will also go to the trouble of having and using secure locks or other crime prevention measures. There are few 'pure' identification programs, as they are normally administered along with other elements of target hardening. Standard community crime prevention programs consisting of a number of integrated elements make assessment of one particular element quite difficult. While we cannot assume that participation in one aspect of an integrated program will ensure participation in other aspects, it seems reasonable to hypothesize that involvement in various aspects would represent a cumulative scale rating from relative ease or difficulty of individual effort. If this were true, those who take part in the property marking aspect of a program would also participate in those elements requiring less effort.

Participants are also more likely to report burglaries to the police (Schneider, 1975; Hayes et al, 1978). The tendency to report may be an extension of the tendency to participate or it may be due to an expectation that, since their property has been marked, it could be identified and recovered. It would not seem logical to go to the trouble to mark items and then not to bother reporting their loss. For whatever reason, it appears that those who participate in property marking programs are more sensitized to the general idea of crime prevention. Co-operation required for engraving property may reinforce this sense of protectiveness and responsibility. In this sense, property marking programs may indirectly contribute to a reduction in victimization.

Another type of self-selection bias which could affect the levels of victimization for participants is that recent victims may be more inclined to become involved in a property marking program. This would have the effect of selecting out a group of participants which has a higher rate of victimization than the general population. Assuming that crime rates are randomly distributed, the participants would have roughly the same risk of victimization as that of the general population. As a result, a reduction in the burglary rate for participants would be expected for reasons of statistical probability alone (a phenomenon which is known as regression to the mean).

Despite these difficulties, there have been several successful programs based on property marking. The first was a project carried out in Portage la Prairie, Manitoba (Jones, 1982). This program was targeted at residential and commercial burglaries and thefts. Operation Identification and Operation Provident programs were implemented by students hired over three successive summers. By the end of the third year, the entire city had been included. The evaluation found that after the first year, commercial break and enters declined by 70% and residential break and enters by almost 50%. While there was a continuing decline in commercial break and enters in the second and third years, residential burglaries increased during this period. However, they still remained below the levels which existed prior to the program. A further indication of the success of the program was found in an analysis of crime reports which showed that in the third year of the program, 81% of residential break and enters and 78 percent of commercial break and enters occurred at premises not participating in the program.

The impact of this program cannot be unambiguously attributed to the property marking program. There were also intensified police patrols and a high priority was placed on burglary investigations. Also, the program likely sensitized community members to take more precautions concerning their property in addition to the marking.

A more recent evaluation of a property marking program was carried out by Laycock in Wales (1985). The program was implemented in three rather isolated villages in South Wales. This isolation reduced the likelihood of geographic displacement. A great deal of effort was devoted to ensuring a high participation rate and teams of police officers visited all the residences in the area and also did several follow-ups in person and by mail. The overall participation rate was 72%. This level of effort was very much greater than is typically given in property marking programs and resulted in a much higher than normal rate of citizen participation.

In the twelve months after the implementation of the marking program, burglaries declined by 40% from a rate of 5.1% of homes to a rate of 3.0%. This difference was statistically significant. The impact of the program is further shown by the fact that rates increased very slightly in non-participating households. The fact that this increase was very small suggests that there was virtually not displacement effect. Also, in two of the three areas, the reduction was greatest for markable property. In the third area, there were reductions in the theft of all types of property.

2.5 Media Campaigns

Although media campaigns are easily implemented, they do not work in isolation any more effectively than any other strategy we have discussed. For example, a media campaign (utilizing radio, television, newspapers, and billboards) carried out by the office of the Solicitor General of Alberta was evaluated by Sacco and Silverman (1981). The campaign consisted of two phases. The first advertised the theme "Let's not give crime a chance" to create public awareness of crime prevention and the second used the slogan with specific messages associated with target crimes. When the research was concluded, they reported that there was no impact and suggested a number of factors that could explain these results. First, the respondents did not think that crime prevention issues pertained to them and so the information did not motivate them to change their behaviour. Second there was no target audience for the campaign so the messages were not designed to appeal to any group in particular. Third, the messages were not specific enough - making clear the objectives of the program and how they could be achieved. Only about 12 percent of the respondents remembered any of the information they were exposed to and only nine percent had actually altered their behaviour.

A British campaign described by Linden et.al (1984) was designed to encourage people to lock their car doors in order to prevent thefts from automobiles. The evaluation found virtually no differences in the proportion of unlocked vehicles as a result of the campaign. Again it was found that respondents did not perceive the campaign as relevant to them and there was an element of disinterest that was not influenced by the media alone. However, media campaigns can be useful when combined with other programs. It appears that although it will not change behaviour in and of itself, the mass media can provide general information about crime prevention and inform people about available services, thus complementing other strategies that are being employed.

2.6 Crime Stoppers

Crime Stoppers is one of the most visible, popular, and most rapidly expanding crime control programs in the United States. Initially, it was developed to handle "dead-end" cases that have remained unsolved. Rosenbaum et al, 1989 report on some of the major findings of a U.S. national evaluation of the Crime Stoppers Program. The evaluation involved national surveys of media executives and Crime Stoppers program coordinators, case studies, and an experiment to examine the effects varying reward sizes had on callers' behaviours. It was concluded that the program is very popular and growing rapidly. It has impressive statistics in solving felony crimes, but the study produces no evidence it has resulted in lower overall crime rates in these communities. However, the high visibility of the program coupled with dramatic individual successes is likely to garner the program continuing public support. The experiment into the size of the reward found that the amount is not as important as first thought. However, the wide media coverage, the reward and the anonymity promised to callers may be responsible for the relatively large number of "dead-end" cases that are actually solved.

2.7 Citizen Patrols

The other major form of surveillance activity is citizen patrols. Citizens in a community join together to patrol their communities on foot or by car on a scheduled basis. This patrol is intended to act as a deterrent to potential criminals who run an increased risk of being seen and apprehended. Given the fact that major evaluations of police foot patrol have shown modest (Trojanowicz, 1983) or no (Police Foundation, 1981) reductions in crime, expectations of citizen patrols should not be too high. There have been few evaluations of citizen patrols. The evaluations which have been carried out suggest that public support for such patrols is high, and there may be some impact on crime rates. Rosenbaum (1988b) cites studies done in Ohio and in California which indicate some decline in property crimes in areas which had organized walking patrols.

The idea of proactive citizen patrols has received a great deal of recent media attention because of the problem of crack cocaine distribution in many lower-class communities in the U.S. A recent issue of Time magazine (September 11, 1989) has looked at the attempts by residents in a number of cities to organize in order to take back the streets from the drug dealers. While the article describes a number of successful campaigns, it is unlikely that residents alone can sustain their control of neighbourhood. A more promising approach is illustrated in the Oasis Technique, in which the citizens are supported in their efforts by the police and by other municipal and private agencies. This technique will be described in Chapter 7.

3.0 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

The use of physical and environmental design to control crime is not new. Fences, locks and surveillance have always been used to protect people and property (Gold, 1970). However, interest has grown in the post-World War II period in understanding the relationships between physical design and levels of criminal activity, and then to manipulating design to reduce the incidence of crime. This section of the report reviews the relationships between physical design and crime [or Crime Prevention Through Environmental Design (CPTED)] and evaluates what is known about the effectiveness of altering the physical layout and attributes of buildings and neighbourhoods to reduce criminal activity and the fear of crime.

3.1 Concepts and Definitions

To understand the literature in this area, some historical background is useful. It is also helpful to compare and contrast the traditions on both sides of the Atlantic. Our review revealed that concerns over the relationship between the built environment and crime is concentrated in the United Kingdom and the United States. There is little research in this area elsewhere. Furthermore the traditions in the United Kingdom and the United States are different, for a variety of reasons. This section begins by tracing the origins of this tradition and then explores the varieties of meaning which have been used in CPTED. It is important to spend some time on the conceptual foundations, since much of the work in the area has been subject to oversimplification. As a result, there has been a lack of precision in understanding the relationship between changes to the built environment and criminal activity.

3.1.1 Britain

The evolution of CPTED in Britain has been traced to the original mandate of the Metropolitan Police of London which was defined to be "the prevention of crime; the next detection and punishment of offenders if crime is committed." [Sir Robert Mayne quoted by Marshall (1971:101).] McInnis et al (1984) discern three phases in the evolution of the crime prevention tradition in Britain. The basic technique constituted the bobby on the beat with a high degree of visibility and fast response. After World War II police forces began to encourage modest target hardening (e.g., installation of locks). In 1950 a campaign for crime prevention started which culminated in the sixties with the "departmentalization" of crime prevention with a special section of police departments being created.

According to McInnis et al (1984), compared to the United States, policing traditions in Britain have tended to emphasize crime prevention through target hardening. The U.S. has traditionally defined the police role as catching the criminal (Newman 1972:14). Further, target hardening is also combined with management oriented approaches to crime prevention, where the police officer plays a central role in assisting residents to take appropriate steps. The British approach also tends to use promotional campaigns and community organizations which are directed at encouraging the potential victim to take preventive measures. The British tradition of crime prevention emphasizes the management of the existing environment rather than wholesale redesign of housing and neighbourhood form. The selective target hardening techniques of improving locks do not represent a major change in the built environment and serve to bring police expertise to residents.

Generally, British efforts in CPTED have been focused on the control of vandalism, by publicizing the costs to all taxpayers, increasing penalties for the offence, and through target hardening. According to McInnis this tradition is based on the notion that vandalism is essentially meaningless, and therefore not really controllable at the source through greater understanding of criminal motivation. Reducing the opportunity and increasing the penalties are seen as a more fruitful approach. This focus on vandalism compared to other crimes (e.g., assaults) reflects their higher relative incidence in Britain (and the relatively lower incidence of other crimes). Also the emphasis on changing public attitudes rather than altering physical design is reinforced by programs which change management practices in high crime buildings and which has produced some reduction in observed crime rates. An example cited by McInnis et al(1984) is the Park Hill development in Sheffield which according to Banham (1974) violates most of the accepted design principles for the built environment. Yet this community continues to maintain a relatively safe residential environment. The creation of a "caring attitude" on the part of the officials in the face of architectural flaws is credited with success (Banham, 1974).

Therefore the tradition in Britain is to use selective changes in the physical environment (target hardening) and management of the existing physical structures. However, recent work by Alice Coleman (1985) has led to a shift in this pattern. Coleman has focused on design and her work has encouraged the government to put a great deal of money into re-designing existing housing estates. While these changes are only in the planning stage, the emphasis on design has generated a great deal of controversy in Britain. This debate will be discussed later in this chapter.

3.1.2 The United States

The situation in the U.S. is perceived to be quite different from that of Britain. In particular the northward migration of blacks in search of employment in northern cities, created the demand for cheap housing. The economics of apartment construction dictated the development of high density residential structures on low valued land. The creation of ghettos resulted from discrimination in job markets and the incidence of crime soared in many inner-city districts. Rising crime rates prompted the exodus of middle class populations which further accelerated the decline of inner city neighbourhoods and their service functions.

Most analysts pointed to the extreme economic disadvantage, social and cultural deprivation, and high density as the cause of high crime rates. The high density combined with the need to keep construction costs to a minimum produced an approach to inner city housing which encouraged many to study the relationship between physical design and layout and criminal activity.

In the twenties, the Chicago school began linking the physical environment to human behaviour (See Jeffery (1971) for a review of these trends). These trends were applied to urban planning in the sixties by Jacobs (1961) and by Wood (1961).

Jane Jacobs' The Death and Life of American Cities had a profound impact on urban planning. Her thesis was simple. People, not police, are the guardians of the public space. She focused on the sidewalk and on the role that "eyes on the street" played in maintaining social control. Her critique corresponded to a growing concern over the style of urban America, which emphasized high rises, separated by public space without specific responsibility. In addition, she criticized zoning and other land use practices which tended to produce extreme cycles of activity throughout the day. Office areas became vacant after supper. These building practices led to a cessation of informal surveillance and a reduction in the sense of community among residents.

According to Jacobs city streets are unsafe because they are deserted. To make them safe requires:

- delineation between public and private space;
- buildings oriented to the street to allow the "eyes of the street" to monitor activity;
- continuous (24 hour) use of the streets.

Urban planners in the sixties looked to the European city and its high levels of street activity as a model to counter the impersonal high rise residential areas which they saw as endemic to urban America. By having amenities such as cafes, schools, shops, etc,, people would be drawn to the street; the high levels of activity would allow constant monitoring and crime would be discouraged.

Research failed to confirm this. Ramsey (1982) found that bars are trouble spots and crime centres. Engstad (1975) has shown that commercial locations such as bars are associated with high levels of crime and Greenberg, Rohe and Williams (1982) found that residential burglaries were higher near commercial areas. Others such as Mawby (1977) and Maxfield (1981) argued that more people lead to crowding, greater "incivility" and increased cover for many types of crime. The presence of more people does not necessarily increase feelings of community.

Despite the fact that Jacobs based her opinions on personal observation, and clearly had a simplistic notion of the relationship between city form and crime, she has had a vital impact on urban planning thinking in the sixties through to the present. Her notion that increased activity at street levels would increase monitoring and control of anti-social activity is an antecedent of later developments which stress surveillance as a method for controlling crime.

Elizabeth Wood provided another early voice to oppose the then current building practice. She argued that high rises "seem designed to minimize or to prevent accidental and casual communications between people and the informal gathering of people, and to provide minimum facilities for the formal gatherings of people" (Wood, 1961:5). Changing the built environment was not sufficient; sound management was also required. Sound management included caring for buildings properly, and improving landlord/tenant relationships through means such as tenant councils. Wood added a second element to the early design orientation of crime prevention.

The change in physical design promoted by Jacobs and the increased use of management advocated by Wood remain as two important elements in controlling urban crime. Since the early sixties, significant resources have been expended on better understanding the relationship between environment and crime and on evaluating appropriate responses with respect to rehabilitation and new construction.

The "face validity" of the link between the physical environment and crime persuaded federal agencies to fund large scale research projects to establish the link more completely and to develop specific building and neighbourhood design guidelines. The two agencies which were most active were the National Institute of Law Enforcement and Criminal Justice (NILECJ) and Housing and Urban Development (HUD). Luedtke and Associates (1970) typified the work of many consultants who were engaged to develop precise correlates of urban crime and physical environment. Density and height of structure were soon identified as key variables associated with high crime rates. The outcome variables were typically actual crime rates and/or perceptions of crime drawn from attitudinal survey data.

Certainly the seminal work from this era, which continues to exert significant influence, is that of Newman (1970, 1973, 1980). His term "defensible space" has become an indispensable element of the urban planning and crime prevention vernacular. Newman provided a detailed foundation for the relationship between environmental design and crime -- a foundation which has frequently been oversimplified. In his later writings he moved beyond a purely physical design orientation to encompass social control and management issues, but he remains firmly fixed in urban planning literature as the major proponent of the design of buildings and neighbourhoods as a method to reduce crime.

3.2 Conceptual Foundations for CPTED - The Built Environment

Crime prevention through environmental design is based on a focus on the building and its entrances and its location within the neighbourhood. Target hardening is a term applied to measures taken to raise the resistance of the building and its inhabitants to unwanted intrusion. Defensible space applies more generally to the creation of a space where crime is discouraged, whether inside a complex or the entire neighbourhood. One of the difficulties in this literature is that the concepts of target hardening and defensible space merge. To place visible closed circuit television (CCTV) is to harden the target, while at the same time increasing the defensible space by conveying to potential criminals increased risk of apprehension.

3.2.1 Target Hardening

As noted above, target hardening has been the focus of police activity in the United Kingdom for some time. With the relatively high incidence of vandalism, the focus has been on reducing the vulnerability of the physical environment to degradation. The initial focus on simple target hardening (locks and bars) has now given way to what Clarke (1980, 1983) calls "situational crime prevention." Clarke and Mayhew (1980) produced an important statement of this approach. The situational measures which are believed to reduce crime comprise:

- target hardening through the use of locks and stronger materials to resist damage;
- target removal stresses the removal of cash based items such as using tokens rather than coins for laundry rooms;
- removing weapons such as gun control and the use of plastic glasses in pubs;

- reduction of the pay-off through property identification;
- formal surveillance through closed circuit TV or security personnel;
- natural surveillance uses the residents to monitor and report on suspicious activity;
- environmental management is a diverse policy an example of which is to use housing allocation policies to reduce child density (as a control on vandalism).

Target hardening has evolved a great deal, especially in commercial venues. In some cases, former criminals have been used as advisors to assist stores with theft proofing. Castleman (1984) presents a persuasive journalistic account of how Southlands reduced the robbery rate within its stores (7-Eleven) by taking the advice of an "expert" criminal. Simple devices which revolved around raising the risks of detection such as placing the checkouts on a central platform are thought to make the would be robber more visible to passers by and the increase the psychological advantage of the clerks. Windows are kept clear of display ads, and exits are repositioned to be at the front to remove the possibility of escape down an alley. Cash for change is dispensed in $10 amounts under control of a time delayed access system. All of this is designed to convey to the potential robber that the risk is not worthwhile. An early evaluation of this program was carried out which looked at 120 stores - sixty were changed and the other sixty were left as is. The results - a 30 percent reduction in robberies in the changed stores - led to the company-wide adoption of the program (Linden et.al., 1984).

Table A presents a comprehensive listing of target hardening approaches which are routinely incorporated into many new housing developments in the

United States. These illustrate the range of measures which are believed by planners and architects to be beneficial in reducing crime in residential and commercial developments. A later section examines the formal and informal evidence on the effectiveness of target hardening.

Many of these standards have been incorporated as part of the Shield of Confidence program, which was originally developed by the Hamilton-Wentworth Regional Police. In this program, the Hamilton Police, the Real Estate Board, the Society of Architects, the Home Builders Association, and the Canada Mortgage and Housing Corporation agreed on a voluntary building standard.

Home builders may voluntarily participate in the program. If the standards are met, the police will certify the house and will provide a sticker for the house indicating participation. The program is a good selling feature for builders and may result in lower insurance premiums for homeowners. It is much cheaper to do this target hardening during construction than it is to retro-fit a house.

No formal evaluations have been done of this program, but the Hamilton-Wentworth Regional Police have informally indicated that rates of break and enter in Shield of Confidence houses have been very low.

The major limitation of this program is its voluntary nature. Ideally, this form of target hardening will become part of building codes so that participation will be mandatory in new housing developments. This will soon be the case in British Columbia. Target hardening standards may also be adopted federally.

TABLE 1

EDM DESIGN STRATEGIES FOR CRIME PREVENTION

Target-Hardening

i. Improving hardware (e.g. deadbolt locks) which restricts illegal access to buildings or building units.

ii. Using vandal-resistant materials (e.g. ceramic instead of plaster wallcoverings) which decrease the likelihood and seriousness of vandalism.

Detection Hardware

i. Alarms.

ii. Cameras.

Improving Surveillance Potential

i. Reducing concealment opportunities.

ii. Improving lighting.

iii. Improving placement of windows.

iv. Improving visibility of locations for indoor and outdoor resident service and activity areas.

v. Increasing pedestrian and street traffic.

Controlling Access and Escape

i. Controlling access to and escape from the general area (e.g. through restricted street configurations).

ii. Using real or symbolic barriers to control circulation within the area (e.g. defining zones of influence).

iii. Improving ease and speed of response to crime (e.g. improving access for police/security personnel).

Fostering Territoriality and Social Cohesion

i. Clustering dwelling units.

ii. Decreasing height and size of developments.

iii. Distinguishing between resident and non-resident space.

iv. Reducing incompatible or conflicting uses of space.

v. Reducing differentiation between specific environments and neighbouring areas.

Source: McInnis et. al. 1983

TABLE A

EXAMPLES OF AREAS OF TARGET-HARDENING APPLICATIONS

AREA	WHAT TO DO
Roof	Secure skylights (tamper-proof grills, bars). Fire exits should open only from inside, and sound alarm if opened.
Basement	Access from basement should be only to ground floor. Keep exits to rest of building locked from outside.
Elevators	Provide: 24-hour, vandal-resistant lighting; waiting area fully visible from lobby, or beyond, with no blind corners; convex mirror in upper back corner; audio-intercom or CCTV, recessed against vandalism; heavy plastic shield for indicator lights; stainless steel mushroom call buttons; capacity of guard to stop elevator if intruder pushes in; eliminate emergency stop button if local codes permit.
Stairwells	Use 24-hour, vandal-resistant lighting. Restrict entry from stairwell to upper halls.
Fire Doors	Use panic hardware (vertical bolt, crash bar) inside, nothing outside, with automatic closing and possible alarm when opened.
Entry Door	Install intercom system with buzzer and telephone hookup to control access. Preferably only one entrance door. All doors should be as strong as main door and monitored in same way.
Doors	Minimum 1 3/4" thick, preferably metal or metal sheathed (solid core wood is the next best). Should be flush to wall (if panels, these must be 1/2" thick minimum). If sliding glass, should be break-resistant and lock from inside. Barlock vertical. Peephole, 1/4" with wide angle lens. Chain latch not recommended, easily broken.
Door Frames	Should be flush with wall. Heavy-duty (metal preferable), solid, minimum 2" thick, if wood. Tamper resistant connectors.
Locks	Well-made, 1" dead latch, key-in lock, with 6-pin brass cylinder. Also vertical bolt or 1/2" horizontal bolt, strong metal. If lock extends beyond door, it needs bevel ring, escutcheon plate. Spring latch not recommended.
Windows	Need locks, preferably key-type. Security screen (removable from inside), grilles or bars (steel, not aluminum, for accessible windows).

TABLE A (Continued)

AREA	WHAT TO DO
Alarms	Use local alarm (contact switch, foil strips on windows, motion detectors, etc.) and/or central alarms (connected to police or other security persons). Possible distress signal for the elderly.
Lobby	24-hour, vandal resistant lighting. Lexan/glass on inner doors for visibility. No dark corners or hiding places. CCTV or other monitoring system. Control access to lobby. Doors should open out.
Mailboxes	Heavy (16-gauge) metal, no perforations. Use cylinder (5-pin) locks. Openings as small as possible. Standard design for easy repair. Keep inside lobby, visible 24 hours.
Laundry/Social	Relocate near lobby if possible (basement bad).
Rooms	Use 24-hour lock, CCTV or other monitoring system.Tokens in laundry or vending machines preferable,not coins. Separate area for teenage socializing.
Storage Rooms	Windowless (basement). Extra strong doors and locks. Locked bins for resident storage.
Office	Visible from lobby. Safe bolted to floor. Grilles, bars, alarms for collection windows. Special locked cabinet for master keys, etc. Keep records of personnel with keys.
Garage	Self-closing doors, key or card operated. Doors to building as strong as main door. CCTV or other monitoring system.
Fencing	Decorative (chain fence is too institutional). Leave no area undefined (i.e. open to all).
Lighting	5-10 footcandles, minimum. High intensity (mercury, sodium vapour, floodlights). Plastic translucent globes. Use taller light stands (cover more area, hard to vandalize).
Parking Lot	Needs good lighting, CCTV or other monitoring system. Restricted access. Door(s) to buildings must be heavy duty and secure. Preferably, lot should be visible to tenants.
Recreation	Limited access, CCTV or other monitoring system. Clear demarcation from adult areas.
Landscaping	No dense shrubs or trees that offer hiding places. Benches and proper lighting.

There can be little question that target hardening forms an important element of all crime prevention programs. Equally there are apparent limits. In his review of situational crime prevention, Clarke (1983) notes that crime prevention programs often attempt to motivate residents to take measures such as installing good locks. In one case, he notes that a prevention program designed to encourage car owners simply to lock their cars, actually produced a slight decline in the number of secure cars (as tested by police checking for locked doors). Clarke's examples of unsuccessful programs show that the public may resist promotions designed to encourage certain types of crime prevention behaviour.

Clarke is clearly in the British tradition of crime prevention and believes target hardening and defensible space concepts tend to have a better pay-off than motivational programs designed to alter the causes of criminal behaviour.

Limits to target hardening are also considered by Winchester and Jackson (1982) who evaluate the two stage approach to burglary. In the first stage the robber selects a target based on attributes of the area and then decides to proceed based on probable reward, the chances of being seen and that fact the home is unoccupied. They found that level of security was not a significant factor in this decision.

Despite this caveat and the concerns that some analysts voice that the root cause of crime is not being treated, target hardening remains a central element of crime prevention through environmental design.

3.2.2 Defensible Space

Newman's concept of defensible space is captured in a number of quotes from his initial work. He enunciated a theory which was:

> "a model for residential environments which inhibits crime by creating the physical expression of a social fabric that defends itself." (Newman, 1972:3)

Some initial reaction typified these concepts as the construction of a defensive perimeter which would repel the outsider. Newman's approach was not aggressive, but rather assertive. The ability to deter crime was:

> "... the capacity of the physical environment to create perceived zones of territorial influence... the capacity of physical design to provide surveillance opportunities for residents and their agents ... the capacity of design to influence the perception of a project's uniqueness, isolation and stigma ... the influence of geographic juxtaposition with 'safe zones' on the security of adjacent areas." (Newman 1972:50)

Newman's first work was avowedly oriented to the physical environment and early criticism prompted a broader perspective. Four years later he characterized defensible space as:

> "... a term used to describe a residential environment whose physical characteristics - building layout and site plan - function to allow inhabitants to become the key agents in ensuring their own securicy. However, a housing development is "defensible" only when residents choose to adopt this intended role - a choice which is facilitated by the development's own design. Defensible space therefore is a sociophysical term" (Newman 1976:4)

In this interpretation, the physical environment acts as a catalyst to "release the latent sense of territoriality and community among inhabitants ... for preserving a safe a well maintained living environment" (Newman 1976:4). The application of this general principle has produced a mass of design manuals and specific directions to planners and builders. Newman also provided specific advice to certain public housing projects such as Clason Point Gardens in New York city with reportedly significant reductions in the crime rate.

A particular focus for Newman's ire was the high rise, and his works contain numerous comparisons between high density construction in American and European cities. Like Jane Jacobs, Newman worked in New York City where he was able to observe closely the relationship between form and community. Jacobs comments were purely observational and focused on the disintegration of the relationship between residents and other users of the street. Newman added additional structure to the relationship and developed a more detailed set of theories and conjectures about how physical form alters human behaviour and the propensity for crime. Specifically, in his early work he structured four elements of physical design which constituted the framework for defensible space:

- territoriality is the use of zoning and architecture to promote ownership by residents;
- natural surveillance through the positioning of windows to allow residents an easy view of their external environment;
- image is the use of forms and styles to create the impression of individuality and pride of residence (essentially to avoid the negative aura of public housing);and,
- milieu is the mixing or residential areas with low risk areas (government offices, busy streets, etc.).

In comparison to Jacobs, Newman attempted more empirical work. He compared the crime rates in developments with good defensible space and those with none. He found quite different rates of crime, which prompted quite conclusive statements on the efficacy of physical design. However, he has been strongly criticized. Bottoms (1987) and Bottoms and Xanthos (1981) point out that Newman disregarded the current housing market, distribution of houses and other factors which can produce spatial variation in crime rates. The selection bias inherent in choosing which housing units to classify as "defensible" is clear - apparent vandalism would override any judgements as to defensibility and even if all other physical design attributes were present, this "counter example" would not be included. This typifies the problem of empirical evaluation of the environment - crime relationship. There are simply too many variables to operationalize consistently and then to control. His early statements that high income areas should be segregated from lower income areas were also criticized as bordering on racism.

Despite these criticisms, Newman's approach was more clearly congenial to the planning profession than the high security approach being used in many apartments and public housing projects. Access was controlled and fences, large padlocks and bars were turning many public housing projects into fortresses. Newman and others criticized this "add-on" approach to security and argued for the more attractive alternatives embodied in the concepts of defensible space. His concept of using the physical environment to encourage resident responsibility, without denying the role of good locks, was attractive and continues to have high face validity within the planning profession.

Both Newman and Jacobs approach urban crime from an optimistic perspective. Change the environment and natural human tendencies will exert the social control needed to reduce crime. Many researchers and theorists refused to accept this simple explanation and throughout the seventies and into the eighties the focus shifted more to discovering the spatial correlates of crime. Much of this work provides important guidance for urban planning.

3.2.3 Design Principles for Defensible Space

The work of consultants such as Brill and Associates (1977, 1979), Luedtke (1970) and researchers such as Poyner (1983) provide a design orientation for crime control within housing developments. Brill proposed a staged process consisting of a site analysis which analyzed a development along six dimensions:

- penetrability examines the entrances and pathways around a residence with a view to ensuring that public and private spaces are clearly marked and controlled;
- territoriality refers to how the design and layout encourages residents to take control of their environment;
- opportunities for surveillance is a dimension which rates a residence or development;
- unassigned space is considered a negative element of security as it does not assign responsibility and therefore tends to allow vandalism;
- design conflicts produce conflicting activities such as close proximity of an elders social area and teen age recreation facility which leads to competition for the same space and continuous tension;
- influence of surrounding neighbourhoods contribute to an overall security level within a residence or development.

Once the site security analysis is complete, a plan to rectify the deficiencies is developed. Unfortunately, while the principles enunciated in this approach appear sensible, there is little evidence of a consistent rating scheme. The concept of penetrability is not quantified but is clearly a judgement of the consultant who translates the concepts symbolically onto a map.

The concepts of defensible space prompted a number of demonstration projects funded by federal agencies. Among the more significant were the projects in Hartford and Portland. These demonstration projects moved beyond the purely physical design orientation proposed by Newman and are characterized by four basic principles:

- surveillance to increase the risk of detection and apprehension through improved lighting, security guards and relocation of vulnerable areas close to high traffic areas (e.g., moving the laundry room out of the basement to a space off the lobby);
- movement control extends Newman's ideas of real and symbolic barriers to reduce the accessibility of residential areas to outsiders by keyed access, reduction of the number of entrances, and elimination of congestion;
- activity support enhances the use of common areas and thereby enhances surveillance through clustering of stores, promotion of street activities and information displays;
- motivation is designed to provide incentives to residents to engage in crime prevention, with Neighbourhood Watch being the most common example.

Management has been integrated with CPTED in two ways. First, there is the management of the building or neighbourhood. Evicting problem tenants and setting clear standards for maintenance are advocated by some as an essential element of reducing crime. Second, many planners advocate the use of tenant councils and empowerment to promote a community which cares for itself. The former approach is not as strong, partly because many planners tend to focus on physical design and also because those who recognize the importance of social factors tend to view eviction as somewhat high handed.

Poyner (1983) provides an additional elaboration of these design principals and is one of the first in the design tradition to cite evaluation findings in developing guidelines for the built environment. Of particular interest is using altered street access to provide both reduced access and an increase in territoriality. A typical change to many developments both in terms of rehabilitation and new construction has been to close off streets, use more cul de sacs [which have been shown to have fewer robberies (Frisbie, 1977)], and to place barriers to slow traffic.

Asylum Hill in Hartford Connecticut represents one of the more extensively evaluated crime prevention initiatives based on CPTED. This once fashionable area, had become unsavoury and a three pronged approach was implemented consisting of changes to the buildings and streets, changes to policing approaches and promotion of community groups. The changes to streets were modest, and consisted of reduced thoroughfares and more controlled access. The results of evaluations of this project were mixed. For example Fowler et al (1979) and Hollander et al (1980) found reduced victimization (as a result of resident surveys) while Fowler and Mangione (1982) later found that crime had recovered to previous levels. They also found that people were more likely to use the streets, were more likely to recognize strangers, and felt their neighbours could assist in the fight against crime. In Poyner's view, the change in policing and community organizing had limited effect, but the fact that street changes had some effect in the short-term shows a causal link between physical changes and crime. He develops a number of specific guidelines for neighbourhood layout, street design, design for single family homes and finally design for multifamily developments which simply restate principles enunciated by Newman and subsequent authors.

Poyner's work is significant because the evaluation and research literature simply fails to provide much guidance in refining the principles first outlined by Newman. As noted by Poyner, there has been little attention to the evaluation of defensible space propositions for a simple reason.

> "The rich diversity of ideas that has gone into these demonstrations has been their downfall from the research point of view. Undoubtedly, many of these tactics can contribute to a reduction in crime in the appropriate setting, but when they are bundled together in the same demonstration project it is almost impossible to decide which of those tactics are the most effective and which should be applied elsewhere." (Poyner 1983:11)

The Portland CPTED Commercial Demonstration Project was carried out from 1974 to 1979. As reported by Lavrakas and Kushmuk (1986), this project involved the following changes:

- Security surveys carried out on businesses and residence and an informal security advisor designated from the police department.
- High intensity and in-fill lighting
- Construction of two "Safe Streets for People" designed to encourage pedestrian traffic.
- New bus shelters installed which were designed to maximize natural surveillance.
- A business organization was established.
- Different "Days" were held in the area to clean up the area and to encourage community spirit.

There were two separate evaluations of this project. The first was carried out in 1977. This evaluation showed a substantial degree of success in meeting the goals of the project. The security surveys resulted in business proprietors significantly improving their levels of physical security, though there was no improvement in the physical security of residences. Similarly, businesses increased other crime prevention measures while residences did not. The cohesiveness of the business community increased, as a local business association was revitalized, but there was no increased in the cohesion of area residents. The new lighting improved the surveillability of the neighbourhood, but the attempts to make the environment more usable to the nonoffender population did not result in any meaningful change.

These changes had a substantial impact on some types of crimes, particularly those against business. Commercial burglaries decreased by 48%, while commercial robbery dropped by 17% and residential burglary by 14%. The citywide burglary rate dropped by 10%. The evaluators concluded that the reductions in commercial burglary were directly related to CPTED activities and that the project had an overall positive effect on community confidence.

The second evaluation, which was carried out in 1980, found similar results. The most successful CPTED strategies were found to be security services, organization and support of the business community, and the street lighting program. These all had a long-term positive impact on commercial crime rates. The evaluators outlined a number of lessons for those wishing to replicate Portland's succcess. First, a relatively long time period, perhaps five years, is required to implement major change. Strong leadership is necessary to sustain the effort over this period. Second, coordinated anticrime strategies are very difficult to implement. Those that were the most successful were those that involved only a few groups and that were implemented through existing groups such as the local business association. Finally, changes in the social environment are more difficult to implement than changes in the physical environment. This difficulty was more pronounced among residents than among business people who had common crime and economic concerns to bring them together and who received a financial benefit from their crime prevention activities.

An important development has occurred in Britain with the efforts of Alice Coleman. In Utopia on Trial (1985) she examines building and design practices in council estates. Her perspective is clearly in the tradition of Jacobs and Newman, and she is very critical of practices which suggested that good management can overcome any physical environment.

Her approach was to replicate Newman's study but on a larger scale. In 100,000 dwelling units in about 4000 housing blocks indicators of "social malaise" were collected and catalogued. Litter, graffiti, excrement and evidence of vandal damage were used. The research team inspected each block and collected information on 16 design variables. Included in the design variables were size variables (e.g., dwellings per block, dwellings per entrance), circulation variables (e.g., overhead walkways[2], corridor type), entrance characteristics (e.g, position, type) and features of the grounds (e.g., spatial organization, play areas). Half of the design variables were adopted from Newman's framework. This work has formed the basis of a very expensive estate rehabilitation program which has generated a great deal of controversy.

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[2] Although uncommon in North America, overhead walkways are used in British public housing to connect different blocks at various heights to allow access to another block without having to go to ground level and exit the block.

A key issue in Coleman's work, and indeed the key problem underlying the quantitative analysis of the relationship between environment and social problems is how design variables are defined. There has been very little work on reliability or validity testing, and Newman's and Coleman's work is weakened considerably as a result. Coleman's work ostensibly provides quantitative evidence relating each design variable and its level to the observed indicator of social malaise. There is no discussion on how the various units were actually rated and it is probable that those who did the rating evaluated all variables simultaneously. Further, it is also possible that the raters were very familiar with Newman's hypotheses, and that data collection may have included significant bias.

Coleman produces the usual catalogue of remediation techniques. Again, these procedures all seem very reasonable and each is provided with a strong rationale. Unfortunately, it is difficult to relate a specific measure to statistically valid measures. The appeal is more on the basis of reasonableness and acceptance of the defensible space principles.

There have been several critiques of Coleman's work. For example, Brimacombe (1989) cites evidence that removing walkways (one of Coleman's more controversial recommendations) has failed to reduce crime rates, and that this has created additional problems for tenants. Brimacombe cites an example of a public housing unit which removed walkways, one of Coleman's suggestions; tenants now want them restored. Further, in the public housing unit cited, the changes to the physical environment have not yet produced reductions in crime rates. Most important are the findings that in some apartment complexes, some basic tenets of defensible space are not supported. Whereas Coleman predicts that smaller corridors with greater defensible space (control by tenants) would have lower crime rates, Brimacombe cites contrary evidence.

3.2.4 Evaluating Defensible Space

Newman's work produced two streams of activity. First, there was an explosion of design manuals purporting to provide planners and builders with explicit guidelines about developing defensible spaces. These were largely extensions of defensible space principles. Second, criminologists became much more interested in the spatial pattern of criminal activity. This latter approach sought to redress the focus of urban crime from the resident and residence to more to the offender. As Soomeren notes:

> Buildings don't commit crime. Crime is the work of man. An offense only takes place if there is a potential offender who is motivated (not predestined!) to commit an offense and who is not withheld by social thresholds or the physical impossibility to commit a crime" (Soomeren 1987:12)

Basic research on the relationship between crime and general features of the built environment has proceeded. Brantingham and Brantingham have developed a strong theoretical foundation for their work on environmental criminology and in 1979 proposed a model of offender behaviour based on "cues, cue sequences, and cue clusters that form a template for targets." According to this approach, offenders store information on potential target and are prepared to act on it if the opportunity presents. Rand (1984) presents evidence on the spatial behaviours of offenders. For example, older criminals tend to plan more complex crimes and tend to work farther afield than the younger criminal who tends to act without planning. itself. The work of Brown (1985) and Brown and Altman

(1983), as well as Wilson (1980), and Repetto (1974) are examples of the research designed to discover correlates between residential crimes and attributes of the neighbourhood home. While Newman based his guidelines on general observations of crime data in relations to building height and population density, the work of these later researchers is designed to test specific propositions about the built environment and specific crimes such as burglaries and vandalism.

TABLE 2

Summary of Selected Empirical Research on Residential Crime

Author	Crime	Environment (Unit of Analysis)	Method	Significant Correlates	Sign
Repetto (1974)	Burglary	Reporting Area (roughly a city block)	Regression	Race of Offender	++
				Income	-
				No. of Children	+
Wilson (1978)	Vandalism	Apartment Block	Regression	Child Density	++
				Dwelling Density	++
				Window Area	++
				Landscaping	+
Winchester/ Jackson (1982)	Burglary	Household	Matched Sample	Potential Reward	+
				Visibility	+
				Occupancy	+
				Security	0
Brown/ Altman (1983)	Burglary	Household	Factor Anal. Regression	Visibility	++
				Barriers (Symbolic)	+
				Garage	+
				Barriers (Actual)	+
				Street Signs	+

This sample of empirical research into the relationship between design and crime illustrates a number of key difficulties which impede generalization in this area. First, the outcome measure, or dependent variable is not consistent. Some studies use reported crime rates, while others employ perceptions as provided by residents in victimization surveys. Fear of crime is a poor proxy for actual crime rates, and reported crime is frequently far below actual incidence, especially in high crime areas, where environmental design is applied as remediation. A second difficulty is that the units of analysis vary. Studies which use a spatial unit such as cities or some census geography are simply not useful in understanding what specific neighbourhood or dwelling unit features may be influenced to reduce crime rates. Studies using features at the neighbourhood or house level are more useful, and the work of Brown is credible simply because the unit of analysis allows testing of immediate micro environment features and how they influence crime. Third, the varying statistical procedures and definitions of independent variables is problematic. The use of multiple regression allows for the simultaneous evaluating of various potential factors influencing the dependent variable. In fact, there are frequently critical data problems which prevent clear results. For example, in Repetto (1974) is it clear that the independent variables are so collinear as to completely invalidate the regression results. The definition of independent variables is very difficult. For example, "child density" is often cited as a significant explanator of crime rates, especially vandalism. However, high child density is associated with single parenthood and poverty. Disentangling the various correlates underlying many of the independent variables is arduous. The information is simply not available to produce the statistical credibility that many policy analysts would like, and further the costs of refining the information are very high.

This research shares the problems faced (but not really acknowledged) by Newman and Coleman. No one has properly addressed reliability and validity issues. It is clear that a variety of biases run through much of the research in defensible space.

3.3 Evaluating Crime Prevention Through Environmental Design

Reliability and validity problems continue to beset the testing of both target hardening and defensible space propositions. Until the basic concepts underlying CPTED are operationalized and until reliability and validity testing produces useful measures, there will be little progress in verifying the claims made that the changes in the physical environment and management of housing will lead to a reduction of social problems.

The present state of CPTED is easy to describe. Design principles have become more specific, and empirical work can best be described as preliminary. However, there is little systematic guidance for deciding which specific approach is best. Some proponents such as Coleman vigorously support the defensible space and target hardening approaches. Other researchers stress the need for strong community organization and tenant councils to reduce crime and other social malaise. Each side to the debate can justify their position with many case studies.

A reasonable middle position might be to accept that both approaches are needed for a successful conclusion, but this is not satisfactory. What specific target hardening works best? By how much does increased surveillance reduce crime rates? When is a tenants committee essential for success? Is there a threshold below which any changes have no effect and above which changes have diminishing returns? These entirely reasonable questions cannot be answered. There are simply too many combinations of physical and social conditions and each building and neighbourhood requires independent review. The principles of CPTED are a reasonable starting point, but the evidence is clear that crime cannot be reduced by design along. Mayhew (1979) cites evidence suggesting that demographic factors such as the ratio of children/adults and the number of offenders living in the immediate area may be more important determinants of crime than design. Tenant involvement is also crucial in dealing with crime in multiple-family housing. Pride in residence and feelings of ownership and control are critical factors -- involving residents in that process and using sound management are also essential preconditions for success.

4.0 POLICE PROGRAMS

4.1 Changing Styles of Policing

The 70s and 80s have been decades of challenge and change for the police. The style of policing which has been dominant in North America for much of this century was developed in response to problems of corruption and inefficiency which plagued many large American police departments. The nature of these changes was determined by two factors: the desire to remove the police from the corrupting ties with the community, and the development of new police technology including the use of vehicles and the development of radio dispatch systems. Control of the police was taken from local political organizations and centralized in the hands of police administrators. Department-wide standards were set in areas such as recruiting, training, and patrol methods. Tasks that had been carried out by patrol officers were now handled by specialized central units. Social service activities were dropped and were replaced by a new emphasis on crime fighting. The job of the patrol officer was now one of driving around the streets in a car, isolated from the citizenry, waiting for a dispatcher to send him on a call. An officer's performance was judged to a great extent on the statistics he generated and activities which were not counted, such as citizen contacts, were not encouraged. Officers were frequently moved from one patrol beat area to another in order to keep them from developing ties with the community.

The role of the citizen was also changed. They were discouraged from participating in their own protection, and had little say in the kinds of services they received from the police. All the citizen had to do was call the dispatcher, and the police would soon arrive to take care of the problem in their own way.

This strategy was quite successful in alleviating many of the problems which had developed in the previous era, and it became the dominant model of policing in much of the world. Even though the police in Canada did not have the same problems with corruption as their U.S. counterparts, our police soon patterned themselves after the American departments.

To a great extent this is the way most departments are run today. The police are mainly reactive, responding to incidents as they are phoned in to the police. While there is now some community input, this is typically limited to participation in crime prevention programs which are managed by the police.

This model of policing was not established on the basis of research showing its effectiveness, but rather it was a response to problems with the earlier style of policing. It was not until the 1970's that research was done on the effectiveness of reform policing. This research raised many questions about the efficacy of police practices.

4.2 The Effectiveness of Police Tactics

4.2.1 The Kansas City Patrol Experiment

A number of studies were carried out on the effectiveness of the preventive patrol strategy used by the police. Preventive patrol involves police officers being assigned to particular areas where they are given the duty of patrolling, typically by car, unless dispatched to a call. Between calls, they return to patrolling the streets. The strategy is intended to deter potential criminals, who never know when the police will drive by a potential crime scene. The most important of these studies was the Kansas City Patrol Study (Kelling et al, 1974). Kelling and his colleagues evaluated the impact of an experiment in which the level of preventive patrol in five groups of matched beats was either: 1) the usual level of service; 2) increased to a level two or three times normal; or 3) nonexistent as the police answered calls but did not engage in preventive patrol. A number of evaluation criteria were used, including crime rates and levels of fear and satisfaction among citizens. The main conclusion of the study was that varying the levels of patrol made no difference. While this study has been criticized by many within the police community and does have a number of flaws (Sherman, 1986), subsequent research in other cities has reached similar conclusions. Only where preventive patrol has been increased to massive levels has a reduction in crime been shown (Eck and Spelman, 1987).

4.2.2 Response Time Studies

A subsequent study in Kansas City assessed the impact of another important police tactic - rapid response time. A great deal of resources are devoted to ensuring a rapid response to calls for service including very sophisticated computerized dispatch systems. The evaluation concluded that in most cases, a quick response does not increase the probability of making an arrest or of satisfying the complainant (Van Kirk:1978). The problem was that citizens waited so long before calling the police that a quick response time was irrelevant.

4.2.3 The Rand Detective Study

The third major study which raised questions about traditional patrol methods was the study of detective operations which was carried out by the RAND Corporation (Greenwood and Petersilia, 1975). This study found that many serious crimes cannot be solved; that the special skills of detectives are rarely responsible for arrests; and that patrol officers are responsible for most arrests either through arrests at the scene or through information they obtain when they take the initial crime report. Some of the conclusions of this study have been modified by later research. However, this subsequent work has confirmed the RAND study's main conclusion that too much time is spent working on cases which were unsolvable because of the lack of evidence.

It is important that the conclusions of these studies are not misinterpreted. They do not show that the police are ineffective in controlling crime - the chaos which often accompanies a police strike is a clear indication of the need for a police presence. However, the research does show that some of the major tactics used by the police are not effective and that the police must find ways of using their resources more efficiently.

4.3 The Police Response

4.3.1 Patrol Strategies

What have the police done in response to this research? Some departments experimented with innovative patrol tactics such as address-oriented patrol which focused on locations with a pattern of repeated complaints. This was based on crime analysis, a process of looking for patterns which might provide clues for solving crime and preventing future occurrences. While these programs did show that patrol activities could be directed more efficiently, the results showed no substantial improvement in controlling crime (Gay, Beall, and Bowers, 1984).

Crime analysis has also led to other programs including offender-oriented strategies such as VICAP (Violent Criminal Apprehension Program) and SHOCAP (Serious Habitual Offender Comprehensive Action Program). The latter program identifies and targets juveniles with lengthy records of serious crime. Again, these programs have been effective in targeting on specific offenders, but their impact on overall crime rates has not been demonstrated.

Other innovations such as call screening and differential response, which involve delaying dispatch to calls which are not urgent or even taking reports over the phone rather than in person, also are directed toward efficiency rather than toward control of crime. The same is true of case screening procedures which enable detectives to concentrate their efforts on cases which have a high likelihood of being solved.

These innovations have been necessary in order to free up police resources to implement programs which more directly address the prevention of crime and the reduction of the fear of crime. The most important of these involve strategies to get closer to the community. During the 1960's and 70's some attempts were made in this direction as it became apparent that in order to improve their effectiveness the police had to use the resources which were available in the community. However, this involvement was typically limited to the establishment of community relations units and to the inclusion of sensitizing material dealing with racial and ethnic minorities on training courses. While these programs were a start, they were not very successful because they did not address the underlying issue of the relationships between line officers and the community. Many community relations programs also involved "doing something to" the community, rather than "working with" the community in any meaningful sense. In order to really develop police-community relations it is necessary to make fundamental changes in the way in which the police are trained and organized, and in the strategies and tactics which they use.

4.3.2 The Newark Foot Patrol Experiment

The beginning of a transition toward more meaningful community-oriented policing began with several evaluations of the impact of foot patrol in high-crime areas. The best-known of these was carried out in Newark, New Jersey, and involved a comparison of patrol areas in which officers were assigned to foot patrol with those where patrolling was done by automobile (Police Foundation, 1981; Pate, 1986). The two major findings of the study were rather interesting, as they were somewhat contradictory. Crime rates, as measured both by reported crimes and a victimization survey, did not differ by type of patrol. However, residents in beats where foot patrol was added _felt_ that crime problems had been reduced and that neighbourhood safety had improved.

Some observers have suggested that this reduction in fear is due to the fact that foot patrol officers are able to deal with problems of order maintenance, such as young people hanging around the street or groups of men drinking in alleys and doorways. These signs of disorder are a major correlate of high levels of fear so clearing them up may reduce fear and concern, even though crime rates have not declined. According to Pate, the study also suggests the positive effects of foot patrol may decline over time. This may be due to the fact that as people realize that crime has not actually been reduced, their positive view of foot patrol declines. If this is the case then either foot patrol must be shifted from one area to another to take advantage of the initial positive response, or better strategies for crime reduction by foot patrol officers must be developed, or the foot patrol officers must become involved in a broader range of activities than simply walking the streets of the community.

4.3.3 The Houston Mini-Station Program

One strategy for putting the police back in touch with the community is to walk around the neighbourhood and meet citizens. Another is the use of mini-stations or storefront offices where members of the public can walk in to visit the police. Mini-stations have been used in many cities including Victoria, Toronto, Detroit, and Santa Ana. We will look at the Houston program, as it has received the most thorough evaluation (Skogan and Wycoff, 1986).

The Houston program was implemented as a fear reduction strategy. A Task Force concluded that a storefront office might be a way of reducing the psychological distance which existed between the police and citizens. Residents were encouraged to bring problems or complaints to the office or just to drop in and chat. The two police officers staffing the office were encouraged to get to know the community, to identify problems, to try to improve police services, and to develop programs which would bring the police and the public together. The officers established a number of programs to involve the community including organized monthly meetings with the public, a school program to deal with truancy, and a ride-along program. They also sent out a newsletter and patrolled a park which had been a local problem area.

Skogan and Wycoff concluded that the program had a positive impact on reducing the residents' fear of crime and improving their attitudes toward the police as well as their perceptions of their neighbourhood. However, Blacks and those renting their accomodation did not show a reduction in fear of crime or an improvement in attitudes toward the police. The evaluators feel this may have been due to the fact that the program relied largely on established community organizations to attract citizens to station programs and that Blacks and renters may have been less likely to participate in these organizations.

4.3.4 Community Policing in Flint, Michigan

The foot patrol project which was implemented in Flint; Michigan represents a combination of the foot patrol and mini-station approaches. (Trojanowicz et al, 1983; Trojanowicz and Bucqueroux, 1990). With the assistance of a $2.6-million grant from the Mott Foundation, the Flint Police Department put foot patrol officers in 14 neighbourhoods into local offices (many in schools) where they were accessible to the community. While the officers were called foot patrol officers, their mandate was not just to walk the streets hoping to deter crime through their presence, but rather to focus on crime prevention and the provision of services to community residents. As Trojanowicz has described the role of community officers, "Because foot patrol officers make face-to-face contact with the public, they are able to act as community organizers, dispute mediators, service brokers, and links between the community and local social service agencies" (1986:177). This program represented a large step toward a complete program of community-based policing.

The evaluation of the project showed that many of the program goals were met. Between 1978 and 1981 crime rates declined by 8.7% while they increased in the rest of the city. The real impact of the program may have been greater, as crime rates for the first two years of the program were around 20% lower. However, in the third year the size of the patrol areas was expanded and in one case an area was increased to 20 times its original size. Crime rates rose sharply following this increase.

Calls for service also declined dramatically as a result of the project, apparently because people took minor complaints to their community officer rather than phoning the police station. Citizen surveys indicated that residents felt foot patrol had reduced crime in their areas and they felt safer as a result. While this program was eventually terminated because of a lack of resources, in many respects it was highly successful and has been a model for a number of other programs including one in Edmonton.

In addition to Edmonton, many Canadian cities have implemented community policing programs. These include Halifax, Victoria, Calgary, Winnipeg, and Toronto. Unfortunately, evaluations of these programs have not yet been completed so their impact on crime cannot be determined. However, it does seem clear from the research which has been done that a cooperative effort between the police and the community offers the best hope for a reduction in crime.

4.3.5 The Minneapolis Spouse Abuse Experiment

While much of the research in policing has suggested that closer ties with the community will be the most effective way of reducing crime, the work of Sherman and Berk (1984) supports a police-based response to spouse abuse. The experiment involved 314 misdemeanour spouse abuse cases in Minneapolis to which the police randomly applied one of three different treatments. These were arrest; ordering the offender to leave the home for eight hours; or gave the parties advice which could lead to informal mediation. A follow-up study involving police records and interviews with victims indicated that arresting the offender was the most effective of the three treatments. A follow-up study by Berk and Newton (1985) using a non-experimental longitudinal design in California supported the conclusions of the Minneapolis study.

4.4 Police in Public Housing

One rather interesting innovation in community policing has been to place a community office in a housing unit right in a public housing project. Traditional policing does not address the needs of public housing projects. The police typically patrol in cars, which don't go into the high-rises and town house complexes that make up public housing. Most of what goes on in the housing projects is not visible from the streets. Several Canadian communities have established offices in housing projects. One of the five community offices in Victoria is in a housing unit. In Windsor, officers have also moved into a project which they patrol on bicycle. Unfortunately, the evaluation of the Victoria program is still in progress, and no evaluation has been done in Windsor. However, evaluations of similar programs have been carried out in Burlington, Ontario and in Fredericton, New Brunswick. We will discuss these two projects, as well as a recent one in Sudbury, Ontario.

4.4.1 Burlington

In Burlington, the Halton Regional Force set up a mini-station in a low income residential apartment-townhouse complex (Mitzak, 1987). The project covers one square block where approximately 6000 residents live in six buildings. The mini-station was staffed by a sergeant and four constables. These officers carried out a community survey, implemented Neighbourhood Watch, and engaged in several community development projects. In addition to this proactive work, they also did reactive policing and patrolled both the interior and exterior of the complex on foot. Over a five-month period the project resulted in an increase in citizen satisfaction from 40% to 87%. The residents felt that public safety had increased and that crime had gone down. Calls for service increased 248% over a one-year period, though calls involving criminal occurrences declined. Unfortunately, the program was phased out after five months as the police department required the personnel elsewhere.

4.4.2 Fredericton

One of the most successful mini-station programs in Canada has been the Community Centre which was established in the Devon Family Housing Development in Fredericton, New Brunswick. The Fredericton City Police, working with the New Brunswick Housing Corporation and the Fredericton Housing Authority, opened the Centre in 1986 in one unit of a sixty-four unit housing project.

The Devon project has a high proportion of single parent families headed by females and a high percentage of children. There were problems with disturbances and vandalism, and there was a good deal of fear of crime and disorder both in the project and in the surrounding community. Attempts to resolve the problems with private security and commissionaires were not successful, and the activities of social service agencies lacked coordination and continuity.

To address these problems the Community Centre was given a broad mandate which went far beyond law enforcement matters. While the Centre was staffed by a police officer, many other agencies were involved. The Centre's advisory council consisted of members from the Housing Authority, the clergy, the city recreation department, the tenants association, the Boys and Girls Club, the police, and the provincial Departments of Health and Community Services, Income Assistance, Education, and Labour. This enables a multi-faceted approach to problems which can include intensified police patrols, counselling, eviction of troublesome tenants, recreational activities, and so on.

The daily activities of the Centre are very diverse and are supported by people from many agencies as well as by volunteers. Effective parenting and teen support programs are run from the Centre and represent ways of dealing with the problems caused by teenagers in the project. Reading and creative arts programs are also held for pre-schoolers. Recreation programs include bingo, crafts, sports, and community activities such as barbecues and trips to the lake. Regular information sessions are held on topics such as welfare rights and child abuse. A representative of the New Brunswick Housing Authority comes once a week to deal with concerns and complaints of tenants.

The Centre has been highly successful. While official statistics for the area prior to the establishment of the Centre are not available, the Fredericton police report that the number of complaints received from residents of the project were down from several calls per day to several calls per month. Maintenance costs were also reduced (Touchborne, 1989). However, the greatest success may have been with the service-oriented programs. While no systematic evaluation has been done, there are many reports that residents are less isolated from one another and are much more involved in community activities. A number of the women active at the Centre have developed the self-confidence needed to go back to school to upgrade their skills. While the Centre is still staffed by a police officer, some consideration is being given to replacing the officer with a social worker, because the crime rate has gone down so much that the nature of the problems in the community have changed. One other indication of the success of the program is that Fredericton has established another mini-station.

4.4.3 Sudbury

A similar program was established in Sudbury in May, 1989. As part of the Sudbury Police Department's community policing initiative, a community office was established in a public housing project. The project has 100 units and is located near a 200-unit senior citizens' high-rise and several other co-op and non-profit housing projects. A constable is assigned to the office. While no formal evaluation has yet been conducted, the police suggest that crime has been reduced since the office was established.

One important step taken by the Sudbury Police and the Sudbury District Housing Authority was extensive tenant consultation. The mini-station was proposed first to the tenants association. After they had approved the concept, a notice was sent to all tenants and a public meeting was held to discuss the plan. Subsequent response has been very positive and the housing manager reports that tenants are now applying to get into the project, which previously did not have a favourable reputation.

4.5 The Role of Private Police

4.5.1 The Starrett City Project

Many public housing projects have made use of contract security personnel. There have been virtually no evaluations of the impact of private security. However, a recent study by Walsh and Donovan (1989) shows the potential benefits of a well-run private security program. Stenning and Shearing (1979) have concluded that part of the reason for the tremendous growth of private policing over the past few years has been because they are better able to engage in preventive policing than the public police, whose role has traditionally been to respond after an offense has been committed. While private security has typically operated in a corporate environment such as a factory, office building, or shopping mall, Walsh and Donovan look at the broader question of the ability of private police to succeed at community crime prevention.

Starrett City is a residential community located in Brooklyn, New York. The population of 20,000 people live in 5820 apartment units covering 153 acres. The community also contains a number of parking garages, a shopping centre, a medical centre, a bank, two schools, two nursery schools, and a community recreation facility. The majority of residents are working-class with a reported 1984 median income of $24,000. The entire complex is owned by a private corporation.

One of the most interesting facts about Starrett City is that the crime rate is very much lower than that of the surrounding community. Walsh and Donovan found that the reported felony crime rate in Starrett City was 5 to 10 times lower than that of the surrounding precinct and much lower than that for New York City as a whole. These statistics are supported by the appearance of the community, which is also much more orderly than that of the surrounding area.

Starrett City is policed by a private police department with a strength of 59, all of whom have full police powers. Additional services are provided by the New York City Police Department who typically only enter the complex when assistance is requested. The nature of the police service provided is basically proactive foot patrol which is oriented both to the prevention of crime and to the provision of services to the residents such as helping elderly persons with packages.

Walsh and Donovan found that residents felt safe in Starrett City and were very pleased with the work of the private police department. They felt that the department was responsive to the needs of the residents, and many reported that if Starrett City did not have its own security department they would leave the complex.

The example of Starrett City points out some of the advantages which private police have over their public counterparts in successfully doing preventive work. The owners of the complex have found it worthwhile to provide a police-resident ratio which would be very difficult for a municipality to sustain. They can dismiss unsuitable officers much more easily than the public police, so they can more easily ensure that all employees support the mission of the department. They also are acting as agents of the property owners and have greater access to the property than the public police. They can also remove people who have no acceptable purpose for being on the private property of the complex.

The results of this study may not be directly generalizable to public housing since resident characteristics are likely quite different. Very little demographic data are provided concerning important variables such as the proportion of teenagers, single parents and unemployed persons in the complex. The fact that the turnover of tenants was less than 2% per year is an indication of the stability of the population and is quite different than most public housing projects. However, the study does show the potential of an effective private police force.

5.0 SOCIAL DEVELOPMENT PROGRAMS

5.1 Offenders and Crime

The crime prevention strategies we have considered thus far are consistent with the routine activities approach to crime Cohen and Felson, 1979). This approach suggests that three factors are required for a crime to occur: a motivated offender; a suitable target; and a lack of effective guardians. Most of the work in crime prevention has focused on improving guardianship and making potential targets less attractive. Programs such as Neighbourhood Watch and designing defensible space are intended to improve guardianship, while target hardening and Operation Identification are intended to make potential targets less accessible or less attractive. However, in the long run the problems of poverty, racism, and illiteracy must be addressed if we are to achieve lasting reductions in crime. If these social conditions continue to produce a pool of motivated offenders the problem of crime will continue despite efforts at prevention. Also, many of the defensive strategies, particularly those involving target hardening, may isolate members of a community from one another, as those who can afford it barricade themselves in locked apartments with security systems in buildings guarded by doormen and policed by private security guards. The streets will be left to the poor, some of whom will prey upon the others.

There are several other reasons why strategies which do not deal with the underlying causes of crime are not adequate. First, even when the strategies described in earlier sections of this report are effective, they often result in some displacement to other parts of the community. Second, most crime prevention programs are targeted at property crimes and do not address the serious problem of interpersonal violence. Third, in some high-crime areas there is little reason to trust one's fellow residents since they may be the very people causing part of the crime problem. Increasing the neighbour's ability to watch your property is a dubious achievement if the neighbour is the person who is going to try to steal your possessions. Finally, we have seen that the prevention of crime is very difficult - programs are often hard to implement and even harder to maintain. This is particularly the case in disorganized communities with high crime rates. It is by no means a sure thing that organizing neighbours, or marking property, or altering housing design will be successful, so there is a need for means of reducing the number of potential offenders.

Social development programs are directed at reducing the pool of motivated offenders by altering the conditions that breed crime. For example, improved school programs and job opportunities may reduce a youth's motivation to get involved in delinquency. While evidence on the effectiveness of the social development approach is rather limited, in this section we will look at some different social development programs including those focusing on employment, parenting, neighbourhood improvement, and education. While the lack of research on the effectiveness of the social development approach means that many of our conclusions are speculative, the importance of trying to deal with crime and delinquency at its source justifies any efforts which can be made in this direction.

The need for programs focusing on potential offenders has been shown by the research which has been done on chronic offenders. Wolfgang, Figlio, and Sellin (1972) showed that a small proportion of offenders committed large numbers of offenses. Six percent of the males in their Philadelphia cohort committed 52 percent of all recorded juvenile offenses. They contributed to an even greater proportion of serious crimes including 71 percent of homicides, 82 percent of robberies, and 73 percent of rapes. This finding has been replicated in a number of studies using both official and self-reported occurrence data (Farrington, 1987).

Many of the social factors correlated with high rate offending are those associated with deprivation and disadvantage. Among these were poor child-rearing and supervision; antisocial parents and siblings; low family income; and school failure (Farrington, 1987). Thus children who come from homes where discipline is inconsistent and erratic; where parents do not care for them; where parents themselves may have problems with drugs and crime; where parents are poor and unemployed; and who do not achieve at school make up the group of individuals who are most likely to be potential offenders.

5.2 Social Development Strategies

5.2.1 Parenting

Many studies have shown the importance of the family in the causation and prevention of crime and delinquency. For example, in their review of research on predictors of male delinquency, Loeber and Dishion (1983) found that parental family management techniques was the best predictor of the onset delinquency involvement. Other research has found that the strength of family ties, parental supervision and discipline, and the role model provided by parents are all related to delinquency (Linden, 1987:225-26).

We will discuss several programs which have addressed the problems caused by poor family relationships, but it must be kept remembered that this is not a problem which can be considered apart from other social ills. One cannot separate parenting from other issues related to resources and skills. For example, many persistent delinquents come from single-parent families typically headed by females. Even if parenting skills could be taught it would be extremely difficult for a poor parent, acting on her own, to effectively manage a household consisting of several children without outside help.

Elliott Currie (1985) has pointed out that the relationship between broken homes and crime is due to the history of conflict prior to the break, and to the fact that the parent with custody of the children may lack the financial resources and support systems to do an adequate job of childrearing. Thus family problems may be caused outside the family and may be amenable to change if support programs are provided. In a similar vein, Harriet Wilson (1980) has concluded that poor supervision on the part of parents is a result of chronic stress, unemployment, disabilities, and poverty. Thus the laxness of parents who do not properly supervise their children is itself a result of the parents' social situation.

The answers to these problems lie in first strengthening the family economically. Employment and upgrading training for those who are unemployed or underemployed is a necessary step. Single parent families and those where both parents work require adequate day care and flexible work schedules. Single mothers, whether employed or at home, may benefit from support programs where they can get child care, counselling. Programs which simply offer contacts outside the home can help to break down the isolation which is often a problem for poor single parents. Economic problems can also be alleviated if provinces more aggressively pursue maintenance and child support orders against husbands who attempt to avoid paying.

Families with teenage parents have a much higher risk of breakdown and problems with children. Further, many teenage mothers never marry in the first place. Reducing this problem can involved family planning which will help to avoid pregnancy or providing support for teenagers who do have children. Currie (1987:248) has described one program, Project Redirection, which has been successful in keeping teenage parents in school or at work as well as providing parenting courses. Evaluation of the program has shown that it was effective, but that the effects did not persist once the youth left the program.

Unfortunately, there are few evaluations of programs directed at improving parenting. One promising start has been made by Gerald Patterson and his colleagues at the Oregon Learning Center. Based on his experiences treating several hundred families of antisocial children and on very detailed observation of interaction patterns within these families Patterson (1980) concluded that "since antisocial acts that are not punished tend to persist" the key to changing the behaviour of these troublesome children was to teach their parents how to discipline them. This process consisted of teaching parents to 1) monitor the child's behaviour; 2) recognize deviance; and 3) punish such behaviour.

In a properly functioning family, parents understand this process and the system is activated by the bonds of affection and caring which exist between the parent and the child. The key is not just punishment - it was found that many parents of problem children punished them more often and more harshly than did the parents of normal children. However, the parents of problem children did not know how to punish their children, and punishment actually made things worse.

Working with the families of preadolescent problem children, Patterson developed a program in which parents are taught how to shape their childrens' behaviour by using nonphysical punishments, by rewarding good conduct, and by interacting more positively as a family. The results suggest the program has potential. One evaluation showed that stealing was reduced from an average of 0.83 incidents per week to 0.07 incidents per week. The treatment effects persisted for six months, but by one year stealing rates had gone back to pretreatment levels (Moore,et al.,1979). This finding suggests that parental retraining may be necessary.

Another parenting program in the U.S. was successful, though the impact on delinquency was not measured (Currie, 1985). The government established Parent-Child Development Centers in several cities which were designed to improve the child-rearing skills of low-income parents. A wide range of support services were provided and mothers were trained to teach parenting skills to others. The parents skills with their children were better than those of matched control groups and the children gained in IQ scores. These gains persisted a year after "graduation" from the program.

While these programs were small-scale, they suggest that much can be done to improve parenting skills and to support parents who may be having a difficult time coping with the simultaneous demands of poverty, isolation, and child-rearing. In at least one European country, Denmark, parenting assistance is available to all citizens (Wagner, 1978).

5.2.2 Education

Like the family, the school is of great importance in socializing young people and is an important predictor of delinquency. The school is a pervasive influence in a child's life. For most of the year, children spend all day in classes and return to the school after classes to participate in sports and social activities. More important, the school is an arena in which a child's performance is constantly being judged. Those who are successful are given prestige by teachers, parents, and other adults, as well as by many of their classmates. For those who are successful in school and who enjoy their educational experience, the school reduces the chance of delinquency. However, those who fail are more likely to be involved in delinquency. The correlation between school failure and delinquency is relatively strong and has been replicated in Canada (Gomme, 1985; Kupfer, 1966), Britain (Hargreaves, 1967) and the U.S. (Hirschi, 1969; Polk and Schafer, 1972).

The school has an impact on delinquency in two distinct, but related ways. First, the school is one of the major factors which determines an individual's future social and economic position. Second, is the effect of the school on the daily life of the child. For some, the school experience is interesting, pleasant, and enriching. For others, it is irrelevant, degrading and humiliating.

There are a number of ways in which the school can play a role in reducing delinquency. There is some evidence that teacher style can play a role in provoking deviance or obtaining cooperation and that schools which allow pupils to participate in decision-making will be more successful (Rutter and Giller, 1984). The curriculum and the way it is taught may also make a difference in school performance and delinquency. Weis and Hawkins (1979) have recommended that schools make greater use of such programs as performance-based education, which involves establishing learning goals for each student and developing individually-based programs with rewards for improvement. They also suggest the use of cross-age tutoring and other ways of involving students in the operation of the school, thus enhancing their level of commitment.

Mechanisms should also be established to assist students with the transition from school to work. Schools must also be relevant to the lives of the students. With a society which has an increasing proportion of minority students, curricula must be developed which meet their needs as well as those of the majority.

One other area which has the potential to reduce crime and delinquency is that of pre-school programs for children from deprived backgrounds. Currie (1985) describes the results of a Michigan program called the Perry Preschool Project. The students were black children from poor families. At ages 3 and 4 the children in the program attended preschool five mornings a week and teachers visited the childrens' homes once a week. A control group did not receive these services. Like the earlier Head Start program, this project intended to remedy the impact of the childrens' impoverished backgrounds on their later school success.

The results of a follow-up study of over 120 children at age 19 indicated that the program was highly successful. The experimental group performed substantially better than the controls on a wide range of criteria: employment; high school graduation; teacher ratings of classroom behaviour; post-secondary education; arrests; welfare; and teenage pregnancy Curtis, 1989). The costs of the program were more than recovered because of gains in reduced welfare costs and increased earnings of the graduates.

For older youth, particularly those with serious records, multi-faceted programs are required. While very few evaluations of such programs are available an example of a program which might be successful is New Pride (National Institute of Justice, 1985). This program is a non-residential program which deals with serious delinquent youth in a holistic fashion. Offenders are only selected for the program if they have at least two prior convictions for serious offenses and a current charge. After being referred to the program by the court or by the corrections department, assessments are conducted and an individualized plan is developed. Program youth are enrolled in an alternative school with a 5:1 student/teacher ratio and some are subsequently reintegrated into the regular school system; they are given vocational training and many are helped in finding jobs; and members of their families receive counselling. Throughout their year in New Pride, youth are assigned counsellors who meet frequently with all staff connected with their client and who the program participants under close supervision. While this level of effort is costly, it is much less expensive than keeping the youth in a correctional facility.

5.2.3 Employment

While research clearly shows that positive experiences at home and in school reduce the likelihood of delinquency, the link between employment and crime is less clear. For example, while the debate is too complex to discuss in detail here, there is no consistent pattern between employment rates and crime rates. That is, an increase in the rate of unemployment does not necessarily translate into a corresponding increase (or decrease) in the crime rate. Further, the evidence indicates that having a job does not constrain high risk offenders from committing criminal acts. In his review of the research concerning the relationship between crime and employment, Currie concludes that "it is not just the fact of having or not having a job that is most important, nor is the level of crime most strongly or consistently affected by fluctuations in the national unemployment rate. The more consistent influence is the quality of work - its stability, its level of pay, its capacity to give the worker a sense of dignity and participation..." (1985:116).

Even this conclusion is based on very limited research, as it is very difficult to isolate the effects of employment on behaviour. By the time they get to the age of employment, many youth have already had serious criminal involvement and behaviour patterns have been established which can be very difficult to end. If a youth has a lengthy record of serious offenses, a limited education, and poor work habits, it is difficult to find anyone willing to give him the kind of meaningful work described by Currie. However, it does seem apparent that the short-run training and job placement programs which are most commonly used are ineffective (McGahey and Jeffries, 1985).

While the research correlating crime with unemployment rates and looking at the impact of jobs on an individual's involvement in crime are not conclusive, there is substantial evidence that inequality is related to crime. A number of researchers, among them Judith and Peter Blau (1982), have documented the fact that serious violent crime is correlated with the inequality of income in a city. Further, there is also evidence that serious crime is most likely to be committed by those at the bottom of the social class ladder (Elliott and Huizinga, 1983) and that crime rates are highest in neighbourhoods with high unemployment (McGahey, 1986). Economic inequality is also linked with racial inequality - the over-representation of natives in the Canadian criminal justice system Hylton, 1982) is due both to their position at the bottom of the class system and to the racism which is a major cause of their poverty.

Finally, internationally there is a correlation between homicide rates (one of the few crimes that can be used to compare different countries) and the degree of inequality within a country.

The policy implications of the research on economic correlates of crime are simple to state, but difficult to implement. The research tells us to reduce inequality of incomes, to minimize the effects of racism, and to provide meaningful and stable jobs for as many people as possible. These are difficult tasks in a world where most new jobs are in the service industry and where global competition puts pressure on companies to reduce wages and to keep the labour force as small as possible.

While the other examples of social development we have discussed can be targeted at specific high-risk families or offenders, the discussion of economic factors suggests we take a broader perspective and look at programs which benefit the entire community not just potential offenders. Improved housing and better job opportunities for parents will improve the quality of life for the whole family, and will make it easier for the parents to exercise control over their childrens' behaviour. For example, McGahey's (1986) study of neighbourhood organization in Brooklyn found that adult unemployment limited the stability of local households and youth employment. This resulted in a weakening of informal social controls which contributed to the persistence of crime. Enhancing community life will strengthen those institutions such as schools, churches, and families which are the natural source of community control. If these institutions are weakened because of poverty and other social problems, these natural controls are not operative and deviance will likely increase.

5.2.4 The Eisenhower Foundation's Neighbourhood Program

As a final example of the social development approach, we can look at the Neighbourhood Program which was sponsored in ten U.S. communities by the Eisenhower Foundation. This program provided assistance to community-based organizations in high-crime, inner-city areas. Residents were involved in defining the crime problems and in developing and implementing program strategies. Each of the projects was given $50,000 and provided with technical assistance, and project organizers were encouraged to plan for self-sufficiency after a two year funding period. The programs involved a number of different crime reduction strategies including opportunity reduction, citizen patrols, family-community mediation, and youth oriented projects such as youth employment programs. An evaluation of the project (Bennett and Lavrakas, 1989), which was based on surveys in the target communities, found that community participation was relatively high compared with previous projects, that several of the sites showed a positive impact on residents' fear of crime and concern about community problems, and that reported crime victimization did not decline. Subsequent analysis cited in Rosenbaum (1988) found that the impact was greatest on those with the highest level of participation in the programs.

While the success reported by Bennett and Lavrakas was quite modest, two evaluations of specific projects were also funded by the Eisenhower Foundation. These evaluations looked at individual benefits rather than at the community-wide effects studied by Bennett and Lavrakas. The first was an evaluation of the Dorchester Youth Collaborative Prevention Clubs in Boston. This project was run by a Board of Directors which included parents, community members, and representatives of agencies serving youth. The goals of the project funded by the Eisenhower Foundation were juvenile crime diversion; drug and alcohol abuse prevention programs; and prevention of school dropout (Tatum and Chavis, 1988). Activities included providing supervised activities for youth; education and counselling; street outreach; and medical and legal referrals. While the evaluation was rather limited (the evaluation was conducted two years after project funding had ended, only 9 of the 29 youths who participated in the program were interviewed, and no comparison group was available), Tatum and Chavis conclude that it did have a positive impact. Their crime rates declined, none of the girls in the program became pregnant, and the reaction of the participants and of community members was positive.

The other evaluation was carried out on the Around the Corner to the World (ACW) project in Washington, D.C. The goal of ACW was to empower low income residents through economic development and self-sufficiency; team leadership programs; and skill and learning development (Kopacsi, Chavis and Tatum, 1989). This evaluation was also limited, as it was conducted after the program had been completed, the number of participants was very small, and no comparison group was used. However, some of the results were very positive. For example, 11 high risk youth were employed in a housing rehabilitation project. During the 12 months prior to the program, these youth had a total of 10 arrests. During the 18 month period of their employment, they had no arrests, and in the 12 months after employment 3 arrests. There was a similar drop in police contacts. These youth were also able to live independently and most continued to work or attend school after their employment with ACW ended. Their work-related attitudes improved a great deal during the program, but dropped to almost initial levels after their employment with ACW ended. Other program activities including raising money for home repairs and youth training also appeared to be successful.

5.2.5 Summary

Many people have been critical of the social development approach to crime prevention. For example, in support of situational prevention measures, Clarke (1983) has outlined a number of the deficiencies of the social development approach. First, he does not feel that anything can be done about causes of crime such as poor parenting and social inequality. Second, the causal relationships have not been clearly demonstrated and appear to work indirectly through a number of mediating variables. Third, social development policies fall outside the mandate of criminal justice policymakers.

While we feel Clarke is unduly pessimistic, unfortunately the evidence supporting the social development approach to crime prevention is quite sketchy. These programs are difficult to implement because they typically require the involvement of many different organizations. Also, it is much harder to get funding to support long-term programs since governments and private funding organizations prefer short-term projects. Because of the lengths of time involved, evaluation is also difficult as many factors other than the planned intervention could affect the results. The small number of participants in many of the programs and the lack of adequate control or comparison groups also makes it difficult to come to any strong conclusions about the efficacy of these programs. However, the evidence presented in this chapter does lend support to the view that the social development approach can be effective in reducing crime. Further, we will see that some crime prevention organizations have been able to address social development issues with apparent success.

5.3 A Coordinated Crime Prevention Effort

One of the keys to the social development approach is the involvement of many different agencies. This means that activities will have to be coordinated by a central agency, probably by government. In addition to the need for coordination, there are many functions that can only be carried out by the federal and provincial governments. These include such things as economic development, making the educational system more responsive to the needs of the poor, setting minimum wage levels, and providing safe, secure, and affordable housing. However, it is perhaps paradoxical that despite the need for government involvement and coordination, the involvement of the community is also crucial if prevention efforts are to be successful. This means that the role of government should be to coordinate rather than to control. Structures must be put in place which provide encouragement, resources and information to local groups which would be responsible for the planning and implementation of programs. Those who will be affected by programs must also be involved in the planning and implementation process. As in other types of crime prevention, the great diversity of problems and the uniqueness of each community means that "one size fits all" programs will not work.

5.3.1 The European Experience with Crime Prevention

This approach to crime prevention is more typical of Europe than of North America. For example, the final declaration of the 1987 Barcelona Conference on the Reduction of Urban Insecurity which was sponsored by the Council of Europe had as the first of its six themes the linkage between crime and the deterioration of neighbourhoods and the concomitant problems of family breakdown; loss of feelings of community; lack of community facilities; school problems; racial and ethnic intolerance; youth unemployment; and the lack of involvement of tenants in housing.

In particular, France has developed a national strategy for dealing with problems of crime and the deterioration of inner-city areas. Following the 1981 elections in France, a commission of inquiry was established to examine the problem of increases in crime. The catalyst for this was summer riots in Lyon and Marseille which raised concern about inner-city violence (King,1988). The commission recommended solutions that focused both on law enforcement and on addressing the causes of crime (Waller, 1989). As a result, the government established the Conseil National de Prevention de la Delinquance (CNPD) which brings together national ministers and parliamentarians, mayors, and others who represent the private and voluntary sectors or who can bring special expertise to the group. Below this is the Conseil Departemental (CDP) which is organized at the regional level and which acts largely as an advisory body to the third level organizations, The Conseil Communal de Prevention de la Delinquance (CCPD) (King, 1988).

There are now over 500 of these third-level local crime prevention councils which are chaired by the mayor who is joined on the council by representatives of a number of government and community organizations. Funding is provided to these councils on a contract basis. These contracts encourage a planned approach to prevention by requiring an analysis of a community's crime problems and a plan for dealing with these problems including the projects for which funding is requested from CNPD. According to Waller, most of the programs are funded through reallocation of local money rather than through new funds. These local councils are a link between the national government and the people in the community who work at crime prevention.

While evaluations of the French initiative are limited, Waller has gathered some data which indicate that the program may be reducing crime. National crime rates have dropped substantially since the CNPD was established, and reductions were marginally larger in communities with local crime prevention councils. Some data are available from two areas which indicate the possible success of the programs. In Clichy, a suburb of Paris with 48,000 residents, many of whom are immigrants, the CCPD has organized a wide range of programs directed at youth and at other members of the community. In a presentation to the 1989 Conference on Urban Safety and Crime in Montreal, Clichy reports a reduction in delinquency of about one-third since 1983.

The city of Lille has also implemented a variety of prevention programs. They have established a Mission Locale which provides training and counselling to unemployed and unqualified school dropouts. They have established an alcohol-free cafe in a deprived area with a high concentration of North African minorities. They have also instituted several school programs focused on crime, job training, and drug education. Following these programs, crime in Lille fell by 12 percent which was a greater decline than areas surrounding Lille which did not have these activities (King, 1988). There have also been no repetitions of the 1981 violence and some report more racial mixing. King also notes that one of the main benefits is that the participation in the various levels of councils has educated politicians about the problems of crime and urban poverty.

While positive, the diverse nature of the programs and the limited evaluation make it difficult to attribute the positive effects to the program. Also, many of the programs are long-term and the effects may not be apparent for many years. However, the results are favourable enough to suggest that the French initiative is a worthwhile one.

In addition to the programs discussed here, France has also established policies for revitalizing public housing, the Districts Social Development (DSD) program, which will be described in the next chapter.

Several other European countries, including Sweden and Denmark, also have National Crime Prevention Councils. As in France their role is to gather and analyze crime information, to determine crime trends, to set strategies for crime prevention, and to assess the impact of prevention efforts (Home Office,1988).

A similar process was initiated in the Netherlands following a government study on crime and society (van Dijk and Junger-Tas, 1988). This study, carried out by the Roethof committee, related increases in crime both to increases in the amount of property to be stolen and to declines in the influence of socializing institutions such as the family, church, school and clubs and associations, and to youth unemployment. This analysis resulted in recommendations that the government sponsor a coordinated approach to crime which would involve more effective prosecution for serious offenses, design changes to the urban environment, and social development strategies. As in France, a high level committee, the Interdepartmental Committee for Social Crime Prevention, was established and municipalities were encouraged to form local committees involving municipal officials, police, and prosecutors (van Dijk, 1989). The inter-ministerial committee provides contract funding for projects carried out by municipalities or other groups. The inter-ministerial committee is also responsible for monitoring the implementation of crime prevention policies by government ministries. For example, programs have been initiated to reduce truancy and to provide detached workers to help young people. Youth employment projects have been established and crime prevention guides have been published for planners and architects. A major effort was initiated to improve policing on the public transit system and caretakers have been hired for problem public housing projects. An information network has been established to collect and to disseminate crime prevention information.

Some evaluation work has been done which shows that these initiatives have had an impact on crime. van Dijk and Junger-Tas (1988) have found that the program of hiring security control officers for the transit system has greatly increased the occurrence of travelling without paying, though the effects on customers' feelings of security have been very slight. In terms of the broader impact of all the measures taken while there has been no decline in crimes reported to the police, victim surveys suggest there has been a decline in crime (van Dijk, 1989). The Dutch rely very heavily on evaluation as part of their crime prevention efforts, and there is a great deal of work currently in progress.

5.3.2 A Model for Canada

What are the implications for Canada of the European experience? First, because of the need for a cooperative effort, it will be necessary for the federal government to take a lead role in crime prevention. While it would be possible for a province or even a municipality to work on its own, the impact would be less without federal cooperation. An inter-ministry federal council, mandated to work with the provinces could develop and coordinate policies, and could provide both information and funding to support crime prevention. This council could monitor crime prevention initiatives among federal departments, provide contract funding to provincial and municipal governments, and could support model projects. A similar provincial body could act as a liaison between federal and municipal governments. Municipal crime prevention councils would involve local governments and those like police, social agencies, and school boards who are directly involved in service delivery. This structure would link all those who have a role in crime prevention activities.

At each of these levels, some emphasis should be placed on the involvement of the private sector. Given the important of jobs in reducing economic inequality, private sector employers must be involved. There are many other roles for those outside government. Apartment owners and other business people must be involved in target hardening and environmental design programs. Crime reduction carries with it economic benefits such as higher property values, so it is not unrealistic to expect some support from private funders.

It is also important to emphasize the need for the involvement of local communities in defining problems, determining strategies, and implementing programs. In his review of different approaches to crime reduction Currie concludes that "the most effective ...programs are decentralized, involve the participation of local people, and link their clients to other community institutions" (1985:256). Thus a structure which allows for central direction, coordination, technical assistance, and funding but which gives control over programs to the local community is the most likely to succeed.

It should be noted that sound, large-scale evaluations have not been done of the European approach to crime prevention, so it is not possible to say with a high degree of certainty that this structure will reduce crime though the evidence does suggest it has had an impact. However, if the goal of preventing crime through social development is to be seriously pursued, a coordinated national effort is essential. Without such an effort it is certain that programs will be developed on an ad hoc basis and will be limited in their impact and their effectiveness.

6.0 REDUCING THE FEAR OF CRIME

6.1 Introduction

The 1988 Statistics Canada General Social Survey found that, " ... one in four Canadians stated that they felt 'somewhat' or 'very' unsafe walking alone in their neighbourhoods at night" (Sacco, 1989:60). The findings also indicated that vulnerability to the fear of crime is not evenly distributed in the population and that the fear of victimization does not necessarily affect the same groups (Sacco, 1989). The survey findings suggested that while the types of personal victimization measured most likely involve young male victims, the fear of victimization is more often a problem for elderly females (Sacco, 1989).

Criminal victimization and the fear of being victimized are well documented threats to the quality of life in urban and rural communities (Norris & Johnson, 1987). In response to this threat public officials in Canada, the United States and Europe have sponsored a diverse number of programs, initiatives and strategies that are both offender and victim oriented.

Crime prevention is concerned with efforts to reduce both the actual incidence of crime and the fear of crime (Heinzelmann, 1981). Fear of crime and more specifically, fear of victimization, appears in crime prevention literature and previous research in studying the reactions to crime, correlates of crime, and in evaluations of program effectiveness.

The analysis of the literature identified the theoretical and empirical research which has examined the correlates of fear of crime and the types of prevention programs which attempt to reduce fear.

6.2 Correlates of the Fear of Crime

The majority of the research on the fear of crime can be categorized under three explanatory models - the victimization model, the social-control model and the vulnerability model (Rohe & Burby, 1988; Greenberg, 1986). The victimization perspective proposes that a high crime rate leads to a high victimization rate, which results in a high level of fear in anticipation of being victimized. This model emphasizes direct and vicarious victimization in the development of fear. The social-control model suggests that the deterioration of social control, or the perception that this has occurred, is the source of fear, more than the objective risk of victimization (Greenberg, 1986). The vulnerability model emphasizes the importance of personal characteristics in the development of fear (Rohe & Burby, 1988). Within this model are the categories of physical vulnerability, related to the inability to "resist attack" (Rohe & Burby, 1988:704) and social vulnerability relating to the exposure to the " ... threat of victimization and suffering severe social and economic consequences from victimization" (Rohe & Burby, 1988:704).

Correlates of the fear of crime include physical factors (deterioration, signs of physical incivility), built environmental factors (building size and height, building accessibility, surveillance opportunities), social factors (perceived social mix, social cohesion, sense of community, lifestyle, lack of control over the environment, isolation, signs of incivility or social disorder), demographic factors (gender, age, socioeconomic status), as well as the perceived rate of general or specific crime and victimization.

While some studies investigate these factors or dimensions of these factors individually, the majority of the research attempts to construct models or relationships based on several interrelated factors or dimensions. Subsequently the literature often is not amenable to classification in terms of mutually exclusive categories.

6.2.1 Physical Correlates

Research examining the effects of physical deterioration have hypothesized that higher levels of physical deterioration would be associated with higher levels of fear of crime at the neighbourhood level (Taylor, Shumaker & Gottfredson, 1985; Skogan, 1988) and is associated with additional economic and social effects including housing market values, neighbourhood commitment, attachment, participation and satisfaction (Skogan, 1980; Lavrakas, 1979; Riger & Lavrakas, 1981; Lavrakas & Herz, 1982).

Generally, the findings of this research are inconclusive in that some studies have shown a link between physical deterioration and increased fear (Gottfredson, Taylor & Shumaker, 1985; Riger, 1985; Greenberg, 1986; Rohe & Burby, 1988) while others have not been able to empirically substantiate such a relationship (Kennedy & Silverman, 1985). In addition, some research has indicated that there is an indirect relationship between the two variables and that additional variables or factors such as attachment, satisfaction and sense of community which intervene to complicate the relationship (Wilson, 1982; Riger & Gordon, 1983; Hope & Hough, 1988).

Based on British Crime Survey data, one study tested the "Broken Windows" hypothesis by examining the relationship between incivility and crime at the neighbourhood level. The hypothesis stipulates that incivilities are perceived as signs of crime and disorder which reduces the sense of community and communal control exercised by residents. Decreased informal community control leads to increased criminal activity which in turn increases the level of the fear of crime and reduces the commitment of the residents to the neighbourhood (Hope & Hough, 1988). The data showed that levels of perceived incivilities were strongly linked to worries about crime, satisfaction with the neighbourhood and perceptions of social cohesion. It was concluded that the data supported the general relationship between incivility, neighbourhood deterioration and fear of crime (Hope & Hough, 1988).

Another study hypothesized that informal control was an intervening variable between objective neighbourhood conditions (incivilities) and fear. The analysis indicated that perceptions of disorder (incivility) was one of the variables linking neighbourhood characteristics with fear (Greenberg, 1986).

6.2.2 Correlates in the Built Environment

In terms of the relationship between the fear of crime and physical/environmental design factors, the most notable research was conducted by Jacobs (1961) and Newman (1972). The area of research which has become known as Crime Prevention Through Environmental Design (CPTED) originated from Newman's work on defensible space.

In the comparison of two housing projects in New York, Newman demonstrated that crime and fear of crime was higher in the larger, high-rise project. He attributed this to a variety of negative design features inherent in the high-rise buildings including hidden entrances, lobby visibility, and building accessibility (Newman, 1972; Heinzelmann, 1981; Lab, 1988). Newman noted that these problems negated attempts to build a sense of community, territoriality and a sense of safety (image) or allow surveillance of activity.

Additional research by Newman & Franck (1980), provided support for the defensible space theory and for the influence of the environmental design factors on the fear of crime. A direct positive relationship was found between measures of the physical environment (building size and accessibility to the building) and the levels of burglary, fear of crime and resident turnover in the housing developments (Newman & Franck, 1980; Heinzelmann, 1981; Lab, 1988). The researchers concluded that appropriate physical design features of public housing sites could achieve more stable and secure residential communities. They recommended security features which decreased building accessibility to non-residents, and housing designs which limited the number of units per building, since building size influenced both crime and fear.

Subsequent research addressed the opportunity for concealment (provided by the environment) and the fear of crime (Heinzelmann, 1981 c.f. Rubenstein et.al., 1980) as well as the physical design features on street blocks which made them more or less defensible against crime and reduced fear of crime (Heinzelmann, 1981 c.f. Taylor et.al., 1981). A study conducted by Greenberg et.al.(1982) compared three pairs of adjacent neighbourhoods which experienced varying levels of crime. The findings indicated that differences in physical characteristics distinguished the high and low-crime neighbourhoods. There was less fear experienced by residents in the low-crime neighbourhoods which were more insulated from surrounding areas and the flow of outsiders was inhibited due to land use which was primarily residential. In addition there were fewer major thoroughfares and boundary streets were less travelled.

The environmental approach received significant support from the study and evaluation of the Hartford Crime Control Project. Initiated in 1973, the project incorporated physical and social changes which were implemented in the target area of the study. The design elements involved closing entrances to some residential streets and narrowing others at their intersections with arterial streets in order to reduce outside traffic on the streets and subsequently enhance the residential character of the area. The initial evaluation indicated that the fear of burglary and robbery remained constant in the target area while it increased steadily in the control area (Fowler & Mangione, 1986). A follow-up evaluation conducted three years later confirmed the findings on the lower levels of fear (Fowler & Mangione, 1986).

Recent research has supported elements of Newman's original hypothesis. Testing a model which incorporated defensible space features, Taylor et.al. (1984) found that these features decreased the fear of crime. Christenson & Cranz (1987) found that as an indicator of the quality of life, the fear of crime was significantly affected by the built environment among the elderly. Similarly, Normoyle et.al. (1988) found that building height was strongly associated with the fear of crime among the elderly residents of public housing complexes.

There has been conflicting evidence regarding the effects of the built environment on the fear of crime. A study of a single housing development which had implemented a series of design prevention measures reported mixed results. The findings indicated that the factors including the provision of security personnel was more effective in decreasing the fear of crime compared to the installation of elevator cameras (Lab, 1988 c.f. Arthur Young & Co., 1978).

Additional research has shown that outside physical features were unrelated to victimization (Booth, 1981) and did not have any effect on the feeling of safety by residents (Merry, 1981). Research conducted by Merry (1981) indicated that defensible design features did not guarantee that a space would appear safe or be defended by residents. Further, it was concluded that if social organization was fragmented, design alone will not reduce crime and the fear of crime (Merry, 1981).

6.2.3 Social Correlates

A substantial proportion of the literature reviewed in this area examines the social factors or correlates of the fear of crime and victimization. These studies focus on the relationship between the level of neighbourhood satisfaction (Kennedy & Silverman, 1985), sense of well-being (Angrist, 1974; Lawton & Yaffe, 1980), feeling of isolation, lack of control (Wilson, 1982; Reitzes, 1986), ties or attachment to the neighbourhood (Riger & Gordon, 1983), participation in the neighbourhood (Lavrakas & Herz, 1982), degree of social cohesion (Hope & Hough, 1988), interaction and support in the community (Yin 1982; Lee, 1983; Weidemann et.al., 1981).

Studies examining neighbourhood satisfaction in relation to the fear of crime in the general population as well as with specific subgroups (elderly, low socioeconomic class) have found that in determining the degree of satisfaction, the level of fear is a direct or indirect indicator (Barrett, 1981). Yin (1982) found that fear of crime among the elderly was related to neighbourhood dissatisfaction, low morale and involuntary isolation. Similarly the British research which indicated a strong link between physical incivilities and anxiety about crime also found that these factors were related to neighbourhood satisfaction (Hope & Hough, 1988).

In determining housing success, Weidemann et.al. (1981) concluded that in the evaluation criteria, one of the best predictors of resident satisfaction was the perception of the residents safety from crime.

Other studies have linked the fear of crime to feelings of isolation and weak social ties to the neighbourhood (integration and interaction). The study by Riger & Gordon (1983) on women's reactions to crime concluded that victimization rate was an inadequate explanation and that women's fear was based on context including the strength of their ties to their locality. They recommended that one possible solution to reducing the fear of crime among women was to increase their attachment to their neighbourhoods. Wilson (1982) found that the anxiety residents experienced focused on specific crimes and the fear which resulted was attributed to feelings of isolation by being surrounded by strangers.

Research in this area has focused on the extent to which the fear of crime is related to neighbourhood participation, social cohesion, integration and interaction. Studying the motivation underlying participation in crime prevention programs Lavrakas & Herz (1982) found that fear of crime, perceived risk of crime, or perceived risk of victimization did not differentiate participants from non-participants. However, a study on the elderly concluded that neighbourhood integration for men and voluntary association for women were related negatively to fear of crime (Lee, 1983).

Finally, research on the relationship between fear of crime and the level of social cohesion, integration and interaction has indicated that the lower these factors are, the higher the level of fear. This relationship was evident in the testing of the "Broken Window" hypothesis which concluded that concerns about crime were strongly related to the commitment to the neighbourhood and the rate of social cohesion (Hope & Hough, 1988).

Similarly Rohe & Burby (1988) found that social incivilities and social attachment were the factors most strongly associated with fear. They stated that, "The more social incivilities and to a lesser extent, physical incivilities residents perceived, the higher their level of fear" (Rohe & Burby, 1988:712). They also found that higher levels of social attachment were associated with lower levels of fear.

While several studies support the notion that those with stronger social ties are less fearful (Wilson, 1982; Riger & Gordon, 1983; Rohe & Burby, 1988 c.f. Taylor et.al., 1981) others indicate no significant relationship (Greenberg, 1986 c.f. Greenberg, et.al., 1984; Rohe & Burby, 1988). Other researchers have found that stronger social ties are associated with higher levels of fear (Rohe & burby, 1988 c.f. Gates & Rohe, 1987).

6.2.4 Demographic Correlates

The majority of the literature reviewed has included standard demographic variables in examining causal models of the relationships between variables correlated with the fear of crime. As control or intervening variables, studies have examined demographic variables (race, age, gender, socioeconomic class, education, employment) in terms of direct effects on fear and how these factors interact with other variables to affect the level of fear.

There have been many studies on the effect of age on fear of crime. Clark et.al., (1983) found that the fear of victimization ranked high on the list of concerns of seniors. Lawton & Yaffe (1980) concluded that age integration was strongly associated with the fear of crime. Similarly, Liska et.al. (1988) found that fear and constrained social behaviour were part of an escalating loop and that the strength of the loop was contingent upon age.

Research by Kennedy & Silverman (1985) concluded that gender was the most significant predictor of the fear of crime. In their study of fear of crime in public housing, Burby & Rohe (1988) found that two of the four vulnerability variables were related to fear. They concluded that blacks and younger residents were more likely to be fearful of crime. Further they concluded that race was the only variable significantly related to fear (Rohe & Burby, 1988:713).

Generally, minority status and low income have been suggested as primary indicators of social vulnerability to fear of crime. The importance of these variables has been well documented in the literature on the fear of crime. The findings are consistent in that controlling for other factors, people with low socioeconomic status, blacks, women and the elderly tend to be more fearful (Rohe & Burby, 1988).

These findings are supported by recent Canadian data. The 1988 Statistics Canada General Social Survey (GSS) indicated that in both urban and rural population, females are more than three times as likely males to indicate that they feel unsafe. Further, regardless of gender and urban-rural residence, Canadians 65 years and older are more likely than the members of other age groups to express feelings of lack of safety (Sacco, 1989).

6.3 Prior Victimization and Perceived Crime/Victimization Rate

Much of the literature on correlates of the fear of crime addressed the relationship between prior victimization, victimization rate and the level of fear. Studies which have tested the victimization model and included victimization as explanatory variables have reported mixed results.

Generally, studies found direct victimization to be a predictor of fear (Goodstein & Shotland, 1980; Greenberg, 1986 c.f. Greenberg, 1984a & 1984b; Bankston et.al., 1987; Brantingham et.al., 1986; Norris & Johnson, 1987; Skogan, 1987). However, other research fails to support this relationship (Newman & Franck, 1980; Riger & Gordon, 1983; Taylor et. al., 1986).

In examining theoretical perspectives of fear of crime, Greenberg (1986) found that victimization had a direct effect on fear. Similarly, research in Canada found that feelings of safety were associated with low estimates of the risk of victimization (Brantingham et.al., 1986). Another recent study examined the extent to which self-help measures reduce the long-term impact of victimization on fear. In their study, Norris & Johnson stated that in relation to previous victimization, "Fear is among the most common and lasting reaction victims suffer ..." (Norris & Johnson, 1987:5). Further they explained that the length and the level of fear experienced by the victim was determined by the severity of the crime (Norris & Johnson, 1987). Norris & Johnson (1987) found that victims of a Kentucky statewide sample had higher fear than non-victims.

However, this finding is inconsistent with recent Canadian General Social Survey data which indicated that victims of a violent crime in the survey year were only slightly more likely than non-victims to express a concern for personal safety in their neighbourhoods (Sacco, 1989).

This finding is supported by Taylor et.al. (1986), who reported that fear of crime caused by victimization was an "ecological fallacy" based on aggregate-level data. Analyzing the relationship between victimization and the fear of crime, the study examined the extent to which an individual's assessment of neighbourhood security was related to personal or household experiences of victimization, the crime rate in the neighbourhood and neighbourhood features. They concluded that fear and worry about crime did not result directly from victimization but from an evaluation of the severity of the crime problem in the neighbourhood.

Research which tested the hypothesis that the rates of victimization generated fear among women found that women's fear was based on context, that is, the perceptions of themselves, their neighbourhoods and social ties which affected their level of fear. It was concluded that victimization rates did not sufficiently explain reactions to crime (fear) among women (Riger, 1983).

6.4 Prevention Programs and the Reduction of Fear

The majority of the literature reviewed pertaining to community-based programs which intended to reduce the fear of crime can be categorized as neighbourhood programs, crime prevention through environmental design and social development programs.

6.4.1 Neighbourhood Programs

As part of the community oriented approach to crime prevention, neighbourhood-based programs including Neighbourhood and Block Watch have been adopted in Canada, the United States and Britain. This has been conceptualized as a collective strategy as opposed to the individually focused responses which are typical of most citizens (Rosenbaum, 1988). One of the primary goals of this type of program is to reduce the fear of crime at the individual and neighbourhood level (Rosenbaum et.al., 1986; Rosenbaum, 1987; Bennett, 1988; Rosenbaum, 1988).

Despite the popularity of these programs and the media's portrayal of its apparent effectiveness, until recently there have been few rigorous empirical evaluations of these programs (Rosenbaum, 1987; Rosenbaum, 1988). Empirical support for the concept of Neighbourhood Watch programs has been based on neighbourhood studies of citizen participation and reactions to crime and evaluations of crime prevention programs. Research based on the social-control model of victimization has provided substantial support in that it has shown that fear of crime is lower in neighbourhoods where residents feel more committed, more in control of their environment, where the neighbourhood is socially cohesive (Wilson, 1982; Greenberg, 1986) and where there is a low number of physical and social incivilities (Hope & Hough, 1988; Rohe & Burby, 1988).

Another area of research which has supported this type of program is that which focused on the relationship between social interaction and the fear of crime. Studies which have shown that higher levels of social interaction decrease levels of fear propose that participation in community prevention programs will enhance interaction and decrease fear (Riger & Gordon, 1983; Lee, 1983; Bennett, 1988; Hope, 1988).

Several researchers have examined how successful these programs have been in reducing the fear of crime (Roy, 1985; Lindsay & McGillis, 1986; Mitzak, 1987). Lab (1988) maintained that neighbourhood crime prevention programs almost invariably report reduced levels of fear of crime based on a several types of measures. The most prevalent measure of assessing fear is through victim surveys which ask residents about their feelings of safety in the community and their perceived risk of future victimization. Other methods include questions concerning impressions of overall crime in the community, feelings about whether citizens can have an effect on crime and neighbourhood problems, and general feelings toward components of the criminal justice system (Lab, 1988).

Summarizing the reported findings, Lab (1988) presented early evaluation studies which showed a 75% reduction in subjects responding they were "very fearful" of crime from pre-program rate of 40% to a post-program rate of 12% (Lab, 1988:46). Additional evaluation findings cited from Cook & Roehl (1983) indicated decreased fear of burglary (26%), increased feelings that residents could influence crime (26%) and increase in the belief in neighbourhood crime control (26%) Lab, 1988:46-47).

Despite the findings of this research, recent evaluations indicate that Neighbourhood Watch programs are not as effective as initially proposed. Research which has provided empirical support for these programs has recently been criticized on methodological grounds.

It has been argued that this research has not adequately addressed questions related to the effectiveness of individual or collective responses to crime (Rosenbaum, et.al., 1986; Rosenbaum, 1987; 1988). Further, it has been suggested that the majority of the data analyzed to support these programs has been cross-sectional rather than longitudinal. The use of these data has raised serious questions regarding the internal validity of the findings. Subsequently, it has been suggested that there is, " ... little confidence that the behaviours which distinguish participants from nonparticipants are attributable to the act of participation or the influence of the groups, rather than pre-existing difference between the two groups" (Rosenbaum, 1988:128).

In addition to the methodological criticisms, recent evaluations of Neighbourhood Watch program have failed to show effectiveness in terms of reducing the fear of crime. The evaluation conducted in Chicago neighbourhoods (Lewis, Grant & Rosenbaum, 1985; Rosenbaum et.al.,1985) indicated that the, " ... large majority of comparisons revealed no significant differential change over time between treat and untreated areas. Furthermore, the majority of the significant findings ran counter to the main hypotheses" (Rosenbaum, 1987:11). Specifically, the three neighbourhood with the strongest evidence of program implementation showed increases in the fear of personal crime (Rosenbaum et.al. 1986, Rosenbaum, 1986; Rosenbaum, 1988; Rosenbaum et.al., 1988).

Other studies have reported similar findings. Research on an "Alert Neighbour" program in Tulsa, Oklahoma indicated there were no significant differences between the treatment and control group on any of the variable examined. Specifically, "The degree of fear of criminal victimization occurred at about the same level in both areas" (Connelly, et.al., 1987:126). Bennett (1987) conducted an evaluation of a Neighbourhood Watch program in London and reported that while there were slight decreases in the fear of household and personal victimization these were not statistically significant and were observed in two of the four treatment areas (Bennett, 1987:251).

6.4.2 Crime Prevention Through Environmental Design

The results of the synthesis of the literature indicated that the majority of the environmental design prevention programs which attempted to reduce the fear of crime were related to the defensible space approach.

Based on a modification of Newman's (1972) original work on the elements of defensible space, programs which manipulate physical design features of the built environment to affect changes in crime and the fear of crime operate indirectly through four intermediate goals of access control/target hardening, surveillance, activity support and motivation reinforcement (Kushmak & Whitmore, 1981; Lab, 1988).

The review of the literature on access control/target hardening indicated that this component is frequently used in conjunction with other neighbourhood-based and/or environmental design prevention strategies.

Programs which emphasis this approach include a wide range of strategies or interventions to reduce fear of crime. Increased street lighting, installation of locks, use of unbreakable glass, alarms and cameras, property identification, street design and layout are a few of the examples of this type of prevention.

The "Safer Cities" program in Britain incorporated target hardening strategies (installation of door and window locks, vandal proof fixtures and fittings) in conjunction with extended security service, social and recreational programs and management education regarding security issues.

The objectives of the program were to reduce crime, reduce the fear of crime and to improve the economic and social conditions of inner city areas (Home Office, 1989). Based on the success of a five cities demonstration project, the British government plans to expand this program to twenty additional cities over the next three year period.

Additional community-based programs which incorporate access control as well as other defensible space concepts have been implemented in public housing and residential environments in an effort to reduce the fear of crime. Initiated by Newman's research on the effects of characteristics of the built environment (building size & height; lobby visibility, building accessibility) on the fear of crime and additional research which provided support for the defensible space theory (Newman & Franck, 1980), the U.S. Department of Housing and Urban Development developed guidelines upon which federally assisted housing projects throughout the United States were reviewed and modified (Heinzelmann, 1981).

The most notable work in this area has been conducted by William Brill & Associates (1973; 1977; 1979; 1980); Poyner (1983). Despite the extent of the application of CPTED in various commercial, residential and public housing environments, there are few evaluations determining impact outcomes or effectiveness in terms of crime reduction and more specifically, reduction in the fear of crime.

In conjunction with the Housing and Urban Development initiative during the 1970's, William Brill and Associates conducted "Comprehensive Security" plans in several federally assisted housing sites in the United States. Incorporating CPTED philosophy and concepts, the "Comprehensive Approach to Security Planning" was based on two operating principles:

1) The need to understand the vulnerabilities of the sites. This component of the planning approach involved the identification of the characteristics of the site's physical and social environment which contributed to crime and to tenant fear of crime, caused tenants to alter their behaviour to an extent that opportunities for interaction are limited and social cohesion were underdeveloped.

2) The need for a mutually reinforcing mix of improvements. In order to be effective a multi-dimensional program was required (Brill, 1977, 1979, 1980).

These principles were reflected in the assessment procedure utilized at each site in order to determine vulnerability. The procedure consisted of: 1) Household Safety and Security Survey which measured resident victimization, fear of crime and behaviour modification due to fear of crime. 2) Site Security Analysis which identified the features of the site which contributed to vulnerability. The criteria included site penetrability, opportunities for surveillance, territoriality, unassigned space, design conflicts and neighbourhood influences. 3) Cohesiveness and Organizational Strength of Social Structure which determined the extent to which residents formed supporting relationships useful in resisting criminal intrusions or in controlling anti-social behaviour of other residents (Brill, 1977, 1979, 1980).

Based on the findings of these analyses, a comprehensive security plan involving a range of physical and social improvements was recommended in order to reduce crime and the fear of crime.

The physical improvements recommended for the housing sites varied depending on the results of the analysis. However, typically the improvements included reducing the scale of the housing projects from large blocks into smaller, defined units. In relation to this recommendation, additional site improvements including assigning open space to encourage territoriality, increased lighting, privatize space, improved circulation through the site, structured recreation sites were suggested.

Other recommendations included reducing the penetrability of site and buildings through access control in main entrances, repair and upgrade locks, fencing, windows and doors; increase opportunities for surveillance through increase lighting, prune overgrown trees and shrubs, initiate community based guard service.

Despite the extensive analysis which formed the basis of their recommendations, to date there is no information available regarding the effectiveness of the proposed programs on reducing the fear of crime. In earlier reports, the need for evaluation had been incorporated as one of the operating principles of the 'comprehensive security planning approach' (Brill, 1977). However, apparently this principle was not applied and was subsequently deleted from later reports (Brill, 1979, 1980).

Evaluation of the methodology employed by Brill and Associates on the William Nickerson Jr. Gardens (1977) was conducted by Motoyama et.al. (1980). It was concluded that the observations drawn from the original study were not based on rigorous hypothesis testing but on the basis of descriptive data collected in the study. Further, no statistically valid conclusions in the study proved a causal connection between physical characteristics of the built environment and crime-related behaviours.

The evaluators concluded that while the purpose of the study was achieved (that is, to identify some of the potentially crime-inducing problems) the study did not attempt to test any hypotheses concerning the relationship between crime-related behaviours and the built environment. This relationship was assumed and received minimal support from some circumstantial evidence but was not proven empirically (Motoyama et.al., 1980).

Another demonstration project designed to improve security and resident safety was initiated in the Cabrini-Green housing development of the Chicago Housing Authority. The project was designed to test whether high density, high crime public housing developments could be made into significantly safer and more desirable places for low-income families to live. The goals of the High Impact Program (HIP) were to reduce the incidence and fear of crime and to improve the residential desirability of the development (Housing Research and Development, 1981).

The program included the application of environmental design strategies as well as encouraging social activity which would alter those features of the residential environment which fostered crime and fear of crime (Housing Research and Development, 1981). Implementation of the environmental design strategy involved architectural changes, an electronic security program and a courtyard fencing program.

The impact of the architectural security program on the perceived and actual security of the residents was assessed through official and victimization crime measures and surveys of fear of crime for the target and control project. The findings were mixed in terms of the incidence of index and non-index crime rates. The data showed that the program had some effect on the fear of crime measures (Rubenstein et al., 1980; Lab, 1988) However, this result could not be attributed to design strategies (Rubenstein et al., 1980).

In their methodological review of this evaluation Rubenstein et.al.(1980) concluded changes attributed to the program were not supported by the data, were not based on sound statistical principles and that evaluating change over a year related to the base period artificially inflated the effects of the program.

The Hartford Crime Prevention Project discussed earlier in this section represents another program which applied defensible space strategies in order to reduce the fear of crime. As reported this program had significant effects over the short and long term in maintaining the pre-program level of fear during the post-program period while the control area and city-wide levels increased steadily (Fowler & Mangione, 1986).

6.5 Fear of Crime in Public Housing

The majority of the literature reviewed in reference to the fear of crime particularly with respect to the environmental design perspective has been related to public housing. Many of the demonstration projects and prevention programs have been implemented in public housing environments. However, there has been minimal empirical research specifically pertaining to fear of crime in this population which constitutes 5% of the renters in the United States (Rohe & Burby, 1988).

Due to the publicity associated with the crime problems of large public housing developments in the United States, public housing has developed a reputation of being crime ridden, although there is a great deal of variation in crime levels (Mayhew & Clarke, 1982; Farley, 1982). On the surface, the assumption that factors related to the fear of crime which affect the general population also affect public housing populations appears to be sound. The correlates of fear of crime examined through research on the general population suggest that these characteristics will not only affect public housing residents in a similar manner but due to their concentration may increase the fear of crime among this population (Brill, 1977; 1979; 1980).

The social and environmental characteristics of public housing developments and residents may contribute to a higher level of fear than what is experienced among the general population. The eligibility requirements for public housing ensure that the residents are low income and that there will be high rates of unemployment and many single parent households (Brill, 1977, 1980).

In addition, these developments are typically located in inner-city neighbourhoods with predominantly minority populations and in surrounding areas which have high crime rates (Brill, 1977,1980; Rohe & Burby, 1988). Finally, the developments are constructed for high density populations on a fixed budget which may not allow for defensible space design considerations. These factors may contribute to a level of fear among public housing residents similar to or higher than that experienced in the general population.

Research by Rohe & Burby (1988) which tested three models of fear of crime (victimization, vulnerability, social control) among public housing residents found that social and physical incivilities, personal victimization, race and the adequacy of security measures were the most important determinants of fear. Indicators of the three models included victimization and crime variables (family victimization experience, crime level in the development and larger neighbourhood) personal and social vulnerability variables (sex, age, race, household income) as well as social control variables (social attachment and perceived incivilities).

With reference to the levels of fear, the findings indicated a lower level than was expected given the previous research. This was attributed to the particular questions used to measure fear level and to the fact that the study was conducted in a relatively small city where fear levels are typically low (Rohe & Burby, 1988). Social incivilities and social attachment were most strongly related to fear. The more social incivilities residents perceived, the higher their level of fear. Higher levels of social attachment were associated with lower levels of fear (Rohe & Burby, 1988:712). Fear was also correlated with individual victimization experience and crime levels. Those who had victimization experiences within the last year and those who lived in developments and neighbourhoods with higher crime rates were more fearful (Rohe & Burby, 1988:712).

In addition, the findings suggested that black and young residents were more likely to be fearful. The negative relationship between age and fear was opposite to what was predicted (Rohe & Burby, 1988).

Based on these findings it was concluded that fear of crime among residents of public housing developments appears to be influenced by the same factors that have been found to influence fear of crime among the larger population (Rohe & Burby, 1988).

This study also incorporated measures of physical and social characteristics which have been associated with fear of crime. The physical variables included density, number of units and distance to downtown. The measurement of density (structural and population) originated in the social ecology literature and has been applied to study crime rates at various levels of aggregation. (neighbourhood; rural/urban; individual metropolitan; multi-metropolitan; municipal; national). Studies of this nature have examined population density (size/concentration) and structural density (number of buildings/units per area) in relation to the prevalence of criminal offenses (Poyner, 1981; O'Brien et.al., 1983; Sampson, 1985; Sampson, 1986; Schneider, 1986).

Based on simple correlations the findings of this study indicated that higher fear levels were found among those who lived in larger developments and were closer to the urban core. Fear was also higher among those in higher-density developments (Rohe & Burby, 1988:713). However, when these factors were entered into a multivariate analysis, they were not significantly associated with fear.

The series of the Brill and Associates studies discussed in this section were primarily concerned with the analysis of factors associated with fear of crime in the public housing environment (Brill 1977, 1979, 1980). In assessing the vulnerability of the site, the research attempted to determine the physical and social characteristics of each specific housing development which contributed to the fear of crime among the residents.

It has been noted that these studies did not substantiate empirical correlations between these characteristics and the fear of crime. However, the descriptive data collected provides some insight regarding the extent of the fear of crime problem in these environments.

The analysis conducted at each of the sites included the preparation of a tenant profile providing a demographic overview of the site. While there was some degree of variation, the sites were similar in that they the majority of this population were black, headed by single females most of whom were unemployed, and had families who were in need of multiple social services (Brill, 1977, 1980).

The victimization surveys administered in these studies consistently indicated that victimization rates in the public housing developments were significantly higher when compared to U.S. data on state and national victimization rates (Brill 1977, 1980). The accompanying level of fear in these developments was also very high. In one development, 83% of the respondents indicated that they felt that there was a 50/50 chance or better of being the victim of a burglary in the next year, while the actual percentage of residents victimized by a successful burglary was 9.5% (Brill, 1977:17). Similar findings were observed with regard to robbery. Another measure of fear included anxiety regarding the safety of children. Over 50% of the respondents across several housing developments indicated that they were "worried" or "very worried" about their children being beaten, robbed or extorted either on their way to school or in the development (Brill, 1977,1980).

With reference to the policy implications of the research, the findings suggest that there are several methods which public housing authority management might use to improve the fear of crime situation in these environments. Management could address physical incivilities through improved maintenance and modernization. Federal funds could be targeted to focus on cosmetic problems which are noticeable to tenants. Social incivilities might be mitigated by more strict enforcement of rules and through tenant involvement. The research conducted by Rohe & Burby (1988) indicated that, " ... 30% of the tenants interviewed agreed that the management did not adequately enforce the rules" (Rohe & Burby, 1988:718). Modernization programs should include improvements to security measures including lighting in parking lots, pathways and door entrances, and installation of locks on doors and windows. Finally, management could cooperate with tenants and police to increase patrols of the housing site to assist in the reduction of the actual incidence of victimization.

A recent Canadian study conducted by Canada Mortgage and Housing Corporation (1990) suggests that fear of crime may not be as much of a problem in Canadian public housing as it is in the U.S. While one-third of tenants considered crime to be a major problem in their project, this figure was lower than that reported in a survey of the general Canadian population.

6.6 Summary

This section of the report has presented a review of the research literature on the fear of crime and attempts to reduce fear. This research has established that particular demographic characteristics are associated with the fear of crime. Less conclusively, research has also demonstrated that factors in the social, physical and built environment as well as prior victimization affect the level of fear of crime in varying degrees. These findings have provided empirical support to each of the three theoretical models of the fear of crime.

In addition, this section presented a review of some of the demonstration projects and programs in Canada, United States and Europe which have attempted to reduce the fear of crime through the application of various strategies. The absence of evaluation research combined with the methodological problems associated with program evaluations which have been conducted, precludes the ability to provide a conclusive or definitive statement on what works or what doesn't work in reducing the fear of crime.

The body of research addressing this issue is fragmented in that studies do not often examine the fear of crime from a similar perspective using similar populations and measures. There appears to be a lack of replicability of research which would establish a basis upon which some definitive conclusions might be drawn. Further, some studies and evaluations have not adhered to sound methodological principles which raises issues regarding the reliability and validity of the findings.

7.0 CRIME PREVENTION IN PUBLIC HOUSING

7.1 Introduction

The crime prevention methods we have described in this report all have relevance to public housing. However, there are a number of reasons why public housing should be discussed in a separate chapter. These include the demographic characterstics of residents. While profiles of public housing residents can vary widely, some generalizations can be made. By its very nature public housing represents a concentration of people who are at or near the bottom of the economic ladder.

Virtually no information is available in Canada concerning crime in public housing. One study by Waller and Okihiro (1978) found that proximity to public housing was one of the strongest correlates of burglary rates, though the source of this crime was not identified. Research from other countries has shown that some public housing projects have had high crime rates (Brill, 1977, 1980; Rock, 1988).

This is particularly true in some American and European cities where well-intentioned urban renewal programs led to a concentration of public housing projects, sometimes with tens of thousands of residents, in inner-city neighbourhoods. Lynn Curtis has succinctly described the problem: "Although there are many exceptions, it also is true that many American public housing projects condense into a small area the American dilemmas of race and poverty - together with all of the impotence, indifference, and hostility associated with them" (1982:441).

We have generally avoided such concentrations in Canada, though there are exceptions such as the Jane-Finch area of Toronto, but even smaller projects may be vulnerable to crime. While the rates of crime may not be any higher in public housing than in similar private housing public housing merits special concern because it is publicly-owned and managed. This places some responsibility on housing agencies to ensure that their tenants are safe and secure.

Unfortunately, many of the traditional crime prevention strategies may not be effective in high crime areas such as some public housing projects. This is particularly true of community-based strategies such as Neighbourhood Watch. Often those who support the laudable goal of involving the community in crime prevention activities design programs which take more effort than members of the community are prepared to give. Turning responsibility for crime control back to the community may not work if those residents are too frightened, disorganized, or overburdened with problems to participate. Also, as renters, the tenants of public housing projects have less of an incentive to improve their communities. Cooperation is also less likely in areas that do not have a homogeneous population (Skogan, 1989) as common values are important in creating community. Brill (1977b) has carried out surveys indicating that values are not widely shared and that a high proportion of residents have no close friends in the project.

The consequences of this lack of cooperation have been described by Dennis Rosenbaum (1988:363):

> "Another major lesson from these experimental programs is htat organizing and sustaining community interest in activities directed at reducing opportunity and creating informal social control are considerably more difficult in low-income, heterogeneous areas that are most in need of crime prevention assistance. Participation levels generally are much lower in these areas (Bennett, Fisher, and Lavrakas, 1986), even after a much stronger organizing effort (McPherson and Silloway, 1987)."

Rosenbaum, Lewis, and Grant (1986) have provide the most careful analysis of the difficulty of organizing crime prevention programs in high-crime neighbourhoods. In their study of neighbourhood groups in Chicago, they found that even though community organizations were successful at exposing residents to prevention programs, participation rates were very low. Further, residents showed only small increases in residents' feelings of empowerment and beliefs that collective actions could help to prevent crime. There were also few changes in target behaviors such as home protection, street avoidance, victimization reporting, and collective surveillance. The programs did not increase residents' feelings of social interaction and did not reduce victimization or perceptions of disorder. Finally, even in one neighbourhood where implementation was successful, the programs had very few positive effects.

Curtis (1989) also gives several examples of the lack of cooperation of people living in poor, disorganized communities. In one of the Eisenhower projects, organizers counted on parents to assist with an after school program. While the children responded enthusiastically to the program, only one parent volunteered to help and very few would contribute funds to buy supplies. Individuals are often reluctant to participate in programs aimed at drug enforcement because of the danger. This is consistent with a survey discussed by Curtis which indicates that few Americans would be willing to join a community group against the drug problem. This fear of involvement is not just limited to anti-drug strategies. Even in Canada it is not unusual for organizers of Neighbourhood Watch programs in high-crime areas to be threatened with retaliation.

This lack of willingness to participate can even reduce the effectiveness of environmental design changes. Currie cites a study by Sally Engle Merry who concluded after an ethnographic study of a housing project that "even if such places are designed architecturally to be 'defensible', they cannot really be defended against crime if the social organization of a community is fragmented, atomized, and without solid networks of social support and concern" (1985:256). In the project studied by Merry (1981) residents kept to themselves and tried to avoid contact with other residents.

This returns us to the basic contradiction of crime prevention which is that programs work the best where they are needed the least. Where they are most needed, often in public housing, people may least likely to cooperate and solutions are most difficult to implement. Often one's neighbours are part of the problem rather than part of the solution. The Toronto public housing tenants who found it necessary to put signs on their doors saying that they did not sell drugs so they would not be awakened at night by confused buyers (Hann, et al, 1989) would be unlikely to turn to their immediate neighbours for help solving the drug sales problem.

Even if Neighbourhood Watch could be implemented in a high-crime project, the problems may be so deep-seated that a Watch program would have little impact. Further, the effort required to implement Neighbourhood Watch may outweigh any benefits the program might have. What is needed in many projects is a comprehensive strategy rather than a new program. The problems are simply too complex to be addressed by any single solution.

While residents should be involved in any crime prevention and community development activities, those planning such programs should be prepared to put up the resources and technical assistance needed to sustain the program until residents can get more involved. For example, the involvement of police or security personnel will be required to maintain a certain level of social order before community people will get actively involved.

Community organizing skills may also be required in order to get tenant participation. In many cases, residents may have greater concerns than the problem of crime, so it will be difficult to get them to organize around this specific issue (Podolefsky and DuBow, 1981; Lewis and Salem, 1981). Rosenbaum has observed that "Organizers have learned that crime in itself is a 'no-win' issue... and that successful maintenance requires a continuous group structure, strong leadership, links to outside resources, a full agenda (including social activities and non-crime), decentralized planning, and extensive efforts to communicate with and reward participants" (1988:377).

A better strategy is to form tenants' organizations which have a number of concerns relating to the quality of their lives in public housing. Among these will be crime, and it can be addressed in the context of the other problems residents face. In dealing with many of these other problems such as welfare issues, day care, support groups, and building repairs, residents may also have an impact on crime.

These are some of the general problems concerning the control of crime in public housing. In the rest of this chapter, we shall look at how these problems have been dealt with in other countries and make policy recommendations for Canadian public housing based on the research presented in this report.

7.2 Public Housing in Great Britain

In part because of the high percentage of people in Great Britain who live in public housing (about 1/3), the British have been among the leaders in addressing the multi-faceted problems which often plague these estates. These programs have taken a number of different directions. Work has been done in improving design - road access has been restricted; non-residents' access to the grounds of public estates has been reduced; the number of entrances to blocks has been cut down; parking facilities have been improved and made more secure; and lighting has been improved. Physical security has been improved by strengthening doors, door frames, and locks. Housing management has been addressed by placing management offices on all large estates, involving residents in estate management, and putting receptionists or concierges in large apartment blocks. Youth and community services, which were not included when many large estates were built, have been instituted. There has been a recognition that no single strategy will be sufficient to reduce crime in troubled estates.

The work in Britain has been based on extensive research into the problem of crime in public housing. According to Bottoms and Wiles (1986) public housing projects had the highest rates of offenders and of burglary victimization. Among public housing residents, those who lived in large council estates had higher victimization rates than those who lived in areas that were not predominantly made up of public housing (Hope,1988). Also, public housing areas with the lowest income levels had the highest rates of victimization. However, there was a good deal of variation within areas having similar types of housing and income levels such that class was not always related to victimization. For instance, multi-racial areas had much higher rates of victimization than similar areas with a more homogeneous racial composition (Hope, 1988). While Alice Coleman's research suggested that design differences would explain differences in crime rates between estates, Hope did not find such a relationship at a national level.

One of the more interesting findings of the British research is that one of the reasons for differences in crime rates between public housing projects that are similar in other respects is an inadvertent process of tenant selection (Bottoms and Wiles, 1986). More desirable estates - which typically have low crime rates - have longer tenant waiting lists than less desirable estates. Those who cannot wait to get into the desirable projects are those who are most in need of housing. Also, many of those moving into the desirable projects are transferring in from other projects and these transfers will likely be sought by those who are most concerned with "respectability". This selection process will be self-perpetuating as the adverse reputations of the less desirable estates grow. Given the importance of the composition of tenants in crime rates, this research suggests that the process of tenant selection can be an important to the process of crime prevention.

7.2.1 The Priority Estates Project

Several special programs have been developed to address the problems of public housing projects. One of the most important of these is the Priority Estates Project (PEP). This project assisted local housing authorities to improve conditions on run down, unpopular estates. In analyzing the problems of public housing, PEP staff found that a major weakness was the highly centralized, bureaucratic nature of the public housing system. Power (1989) has stressed four mechanisms through which Council housing could be changed, all of which require decentralization:

1. Service - localizing repairs has been a popular and cost effective step.
2. Flexibility - staff at all levels have resisted change. In estates job descriptions have been drawn up with a flexible element which allows staff to work with one another on problems rather than compartmentalizing duties. Another type of flexibility is devolving management responsibility to local Estate Management Boards or tenant cooperatives.
3. Innovation - people at the local level can develop more innovative solutions, since they are more aware of the problems and of local resources.
4. Openness to Alternatives - since situations and circumstances are continuously changing, organizations must learn to cope with change by examining alternatives.

Following this analysis, the focus of PEP was on improving estate management by establishing a local repair service, speeding up the administration of renting units to reduce the number of empty units, improving caretaking, providing night watchmen to guard empty units during modernization, improving resident allocation policies to avoid concentrations of children and problem tenants, improving police services and involving residents in estate management. While wider support structures were important, the emphasis was placed on local initiatives.

While PEP was not specifically a crime prevention initiative, Hope cites evidence that crime declined in participating estates while it was rising in the surrounding community. Downes and Rock, 1988) discuss the research of Zipfel who concluded that burglary rates declined on all but one of the PEP estates, and that in one project the burglary rate declined by 62 percent. Hope has hypothesized that this crime reduction is due to the fact that improving living conditions has increased tenant involvement with other residents, thus increasing informal social control. Downes and Rock suggest that involving tenants in project management has also helped them to reassert control. Further research is being carried out on the impact of this program and on the reasons for its success.

7.2.2 NACRO Project

Another British initiative was carried out by the National Association for the Care and Resettlement of Offenders (NACRO). In the late 1970s, NACRO carried out a pilot project on a high crime estate which involved a number of improvements. These changes ranged from environmental changes such as better lighting to assigning a beat policemen and community worker to the project. These changes were all carried out following intensive consultation with residents. NACRO also places emphasis on forming liaisons with agencies, such as the police, which provide services to the estates. The results of the initial project were favourable, with victimization rates declining for burglary and vandalism (Bottoms and Wiles, 1986). The NACRO initiative has been expanded to several other housing estates. While figures were not available, Rock (1988) reports that NACRO claims substantial reductions in crime in its other projects.

While most of the strategies used by NACRO have been discussed elsewhere in this report, one of their principles is worth considering here. In their recent material, NACRO has stressed the need for tenant involvement (National Association for the Care and Resettlement of Offenders, 1989). In order to secure this involvement, it is necessary to support tenants' organizations. These organizations need funding, which ideally would be based on the number of members. This funding should be ongoing, and not just allocated for a short-term project. Tenant groups will also need the active support and guidance of the housing authority. Those seeking change should remember that high crime areas are typically the least able to organize themselves, so outside assistance is usually necessary. This can be done by community workers, tenant liaison officers, or even by community police officers. The experience of those who have carried out projects in public housing indicates that chances of success are much higher if some mechanism is found to involve the tenants in the planning and implementation process, so this support is very important.

7.2.3 Kirkholt

A final example of crime prevention in public housing in Britain is a demonstration project on the Kirkholt estate in Rochdale which was funded by the Home Office (Forrester, Chatterton, and Pease, 1988). Kirkholt had a very high burglary rate - over the first five months of 1985 burglaries occurred at an annual rate of 24.6%. The project began with an extensive analysis of the problem. This included analysis of police crime report forms, interviews with convicted burglars, interviews with victims and their neighbours, and interviews with a representatives of various agencies and community groups. Following the collection of this information the project staff organized a problem-solving seminar with representatives from many of these groups.

The problem analysis suggested a number of different directions for crime prevention programming. The project staff decided to target the program on prior burglary victims, as there was a high rate of multiple victimization. This initiative had several elements. First, a high proportion of burglaries (49%) involved the loss of cash from pre-payment gas and electricity meters. The solution was to replace the pre-payment meters with alternate methods of payment. Second, the analysis showed that 93 % of burglars were able to achieve entry by the first method they chose. The security upgrading was based on the methods of entry actually used in the project. Police officers were trained to conduct security surveys. Third, eleven community workers were hired to make up a community support team which carried out victim services functions and did security surveys. They were also responsible for organizing cocoon Neighbourhood Watch groups made up of the victim's immediate neighbours.

An extensive evaluation indicated that the program was very successful. Burglaries declined by 53% during the year following the implementation of the program while they rose slightly in the rest of the police sub-division. Woundings also dropped in Kirkholt and rose in the rest of the sub-division. However, both minor and major damage increased at a higher rate than the rest of the sub-division. The proportion of households that were repeat burglary victims also declined. A further evaluation of the project is being carried out, and Forrester, Chatterton, and Pease report that an early assessment indicates that burglaries have continued to decline. These results show that an intensive effort can achieve very positive results in a high-crime estate.

7.3 France

The problem of crime in public housing has also been a concern in France. Many large housing estates were built during the 1960's. Built on the peripheries of cities, they soon became the location of a wide range of problems. An interministerial committee was established in 1977 to look into the problem, but disturbances in 1981 led to a new approach. The government created the National Commission for Districts Social Development (DSD) which involved representatives of 11 ministries who are encouraged to work with all other sectors which might be able to help solve the problems. According to a description of the program (Commission nationale de developpement social des quartiers, n.d.) the four main principles of the initiative are:

- to act on the causes of the problem as well as on its symptoms. Thus in addition to housing, there is a concern with education, jobs, economic development, culture, health, and sport;
- to give the local community responsibility for the creation and management of the program;

- giving the residents and representatives of their associations the resources to participate;
- to mobilize and coordinate the full resources of the state in support of the problem.

Like the French crime prevention initiative discussed in the previous chapter, there is a great emphasis on local control of programs with the mayor of the city or town having political control. The participation of all three levels of government includes cost-sharing, with the central government providing 33 percent of the funding, regional governments 25 percent, and local authorities 25 percent. The remainder comes from "other partners" (Leroy, 1989).

As in Great Britain, the public housing initiative has many different components. A major component is housing rehabilitation. Over a five-year period almost half the 350,000 units of public housing have been rehabilitated. Along with physical improvements went the creation of day care facilities, new recreational and cultural facilities, and training programs dealing with problems such as illiteracy. Schools serving estate residents have been upgraded and modernized and vocational training programs have been established. Because of the suburban location of many of the estates, recreational and cultural programs have been introduced. Cultural programs range from a graphics workshop to theatre and dance companies to an experimental rock music centre.

One rather innovative program involved changing the use of some housing units, typically in estates with high vacancy rates. For example, in one project 150 apartments were converted into space for a nursing and social work school, a social centre for residents, and commercial premises. This program alleviates the vacancy problem, brings new life and new facilities into the estates, and in some cases creates jobs for residents.

One of the priorities of the DSD has been to involve residents in the planning process. Part of the methodology for accomplishing this is that the mayor is required to hire a project director for each major initiative (Leroy, 1989). The role of this project director is to work with officials and agencies and to consult extensively with residents. The project director is able to mediate between tenants and the various departments and agencies which provide services to the estate.

While there are many statements claiming success for the DSD approach, no rigorous evaluations have been conducted of the program. Thus while the French experience may be useful as a model, there is no hard evidence that it has been successful.

7.4 Lessons for Public Housing

What can be learned from these international experiences? The answer appears to lie in establishing programs of coordinated security planning for public housing projects. Simple solutions will not be successful in projects which have multiple problems. The need for integrated planning has been recognized for a number of years. For example, in their review of crime reduction strategies for public housing in 1978, Rouse and Rubenstein discuss the following integrated approaches: defensible space, comprehensive security planning, turf reclamation, and CPTED. While all of these involve some combination of physical and social strategies, they not nearly as far-reaching as those utilized in Europe.

Based on the work we have reviewed in this report, we have identified a number of areas which can be part of a coordinated approach to crime prevention. In doing this we have not limited ourselves only to strategies which have been demonstrated to be effective but also have included those which we feel have potential. At this point, nobody can claim that a cure for crime in public housing has been discovered, so there is a need to keep experimenting.

There are several difficulties with the approach we propose. It will require major changes in the way public housing is administered and will require that more resources be devoted to the problems of safety and security. Implementing effective programs will require a planning process such as that outlined in the final chapter. Since this process is based on a thorough analysis of the problems, it takes time to work through the planning and implementation stages. Also a multi-faceted program is harder to evaluate, because there is virtually no way of determining which component has the greatest impact on crime. However, since these strategies complement and reinforce one another, isolating the most important component is probably not a realistic expectation. Finally, it isn't likely that the different parts of the program can be introduced at the same time, so considerable thought must be given to which to introduce first.

We will discuss seven different categories of responses to the problem of crime in public housing. These correspond to the program areas used by HUD in their examination of this problem (Curtis, 1982). The categories we will discuss are:

* improved management of public safety by the public housing authority
* environmental design changes
* tenant organizations
* social development programs
* services to deal with crime and to assist tenants
* enhanced policing
* stronger linkages with other agencies which can assist the program

The combination of responses which are used in any specific instance depends on the situation. Public housing managers must be flexible enough to tailor a response which is based on an analysis of the problem, not on some preconceived notion of what programs should be used. Planners must work inductively from the problem to the solution.

7.4.1 Improved Management by Housing Authority

The housing authority carries a great deal of responsibility for the quality of life of public housing tenants. This goes beyond simply providing affordable shelter to include being able to enjoy that shelter without fear of crime (New Brunswick Housing Corporation, 1988). Accordingly, management should try to develop and to implement strategies which will reduce crime and fear of crime. There are a wide range of things which can be done and specific strategies must be developed out of local conditions. In this section, we will provide several examples of areas where management might play a role in crime prevention.

7.4.1.1 Management Structures

In his analysis of management policies on high crime housing estates in Great Britain, Nigel Whiskin (1989) identified a number of shortcomings including:

- problems are administered rather than confronted and tackled
- no simple line management structure or team approach to management
- insufficient authority is delegated to local housing offices
- no simple line management structure. Tenant dissatisfaction, poor staff morale, high staff turnover and unfilled vacancies
- no training for local managers
- lack of control by tenants over the management of their estates.

These may or may not apply to any particular housing project, but they are typical of criticisms which have been raised of management both in Europe and North America.

7.4.1.2 Selection and Allocation of Tenants

Because public housing is seen as the housing of last resort, there are limits on the degree of tenant screening which can be done. However, housing authorities have some control over the allocation of tenants to various buildings. This control may be used to try to minimize the likelihood of tenant victimization. For example, housing authorities can control the mix of ages in a particular building. A number of years ago it was considered best to have people of all ages in a particular building. However, Oscar Newman's research has shown that the elderly were at greater risk of victimization in buildings with a high concentration of single-parent families with children than in any other type of situation. Thus using some buildings primarily for seniors can minimize this problem.

A related issue is that of what to do about troublesome tenants whose behaviour may be reducing the quality of life for many of their neighbours. Private landlords have somewhat more discretion because they do not face the same public scrutiny as public housing and because they are not the last resort in housing for many people. However, particularly with the problem of drug trafficking in public housing, some aggressive action in evicting problem tenants will be necessary. Hann *et al* recommend that such a policy be instituted in MTHA housing. They feel that the strength of the 'last resort' argument is weakened by the fact that there is a long waiting list for public housing so space should go to those whose behaviour does not adversely affect others.

7.4.1.3 Staffing

There are a number of staffing issues which are relevant to crime prevention. Both Curtis (1982) and Hann *et al* (1989) recommend that housing authorities have a senior position of director of security to coordinate all security matters. While this position would have a number of functions, one is simply communication with other parts of the organization. In large projects, it is not uncommon for staff in one location to be unaware of successful initiatives which take place in another. Hann et al also bring up the issue of staff transfers in MTHA (Metro Toronto Housing Authority) housing. Frequent transfers led to a lack of coordination and inconsistent programming. They found that projects with the best records had staff who worked as a team and who had frequent problem-solving meetings. Close teamwork on the part of staff was a prerequisite of "getting control of the building" (Hann et al, 1989).

One other staffing issue is the presence of a doorman or concierge. Waller (1982) found that the presence of a doorman lowered the risk of burglary in apartment buildings. Similarly, Osborn (1989) reports that on the results of the introduction of a concierge in the Elizabeth Street project in Preston, England. The system involved a concierge in one building who also monitored two other buildings through security cameras. A card controlled access system was also used. In the 3 months after the system was introduced, there was an 89% reduction in the burglary rate.

7.4.2 Environmental Design Changes

Much of the work on environmental design has been done on public housing, and was reviewed on Chapter 3. While this research does suggest that design factors can facilitate the occurrence of crime, it also suggests that altering the environment alone will not have much impact on crime rates. The impact of environmental design depends upon the behaviour of two sets of actors - residents and potential offenders. The physical environment may be changed to facilitate increased surveillance and control of one's property or of that of the neighbours, but if nobody looks or if there is no response to signs of crime and disorder, then the environmental changes will have no impact. Similarly, there is the question of whether or not potential offenders are aware of, and respond to, changes in the environment.

Given the flaws and ambiguities in the research on the effectiveness of environmental design, planners must work in the absence of conclusive data. On the basis of our review of the literature, our assessment is that design changes can have an impact on crime, but that design must be used in combination with other strategies.

7.4.3 Tenant Organizations

One major theme of recent attempts to improve public housing has been tenant involvement. All of the European initiatives, particularly those in Great Britain have stressed the need to work with tenants. Even those such as Oscar Newman whose main concern is with housing design recognize the need to involve residents in project management and in security (Rouse and Rubenstein, 1978).

There are many reasons for involving tenants in security planning:

* Tenant cooperation - any programs that are instituted are going to require the cooperation of tenants, and prior consultation is the first step in arranging that cooperation. The need for tenant cooperation is obvious in programs such as Apartment Watch and in social development strategies which require the participation of residents. However, the role of tenants is important even in programs involving environmental design changes. The concept of defensible space is based on enhancing the ability of residents to claim and defend territory. The tenants role may be less obvious in target hardening strategies but even here, the tenants must be willing to accept the physical changes which are made to their living environment.

- A formal link between housing administration and tenants - perhaps the most effective for the housing authority to work with residents is through an elected tenants association. In a large project, representatives can be elected by areas or floors, so that all tenants will be directly represented.

- Empowerment of tenants - Lynn Curtis has stated that tenant involvement places an "emphasis on enabling the poor to take charge of their own lives - on helping them gain a sense of competence and worth, a sense of being somebody who matters" (1982:443). Often the poor have decisions made for them by the bureaucracies they depend upon, and are not allowed to develop their own capacity for decisionmaking. Involvement in tenant organizations allows them to build these skills and to contribute to improving the quality of their lives. Residents are also empowered collectively, as a tenant organization gives them the autonomy to express the concerns of the community to housing authority officials and to other groups and agencies.

- Improving the information available to housing authorities - regular meetings with tenants increase the feedback housing authorities receive about their policies and about problems in the community. Tenants can also provide information about other residents who may require assistance or creating problems.

- Increasing contact and communication among residents - one of the problems with high-crime public housing projects is that residents have little sense of community, and do not have much contact with other residents. Residents can feel isolated and often have no friends to turn to if they are having problems. Involvement on tenant committees to make decisions about their common lives can bring residents together under positive circumstances. These contacts can lead to the development of supportive relationships. Tenant groups may expand these benefits to other by establishing tenant-run programs which will broaden the base of involvement, and by sponsoring a system for welcoming new tenants and introducing them to their neighbours.

- Developing indigenous leadership - Paul Rock (1988) has suggested an interesting hypothesis concerning the role of tenants in crime prevention programs on housing estates. Trying to explain the fact that very diverse initiatives have shown success in reducing crime, he suggests that one of the most important effects of these programs has been to permit the emergence of indigenous leaders (typically matriarchs) who took charge and made the programs work. This empowerment of local leaders may be as important to crime reduction as the specific nature of the programs themselves.

This discussion of tenant participation has assumed that tenants are interested in participating. Since this may not always be the case, there are ways of increasing the likelihood of their involvement. The first is to ensure that tenant participation will be meaningful. Residents will be more willing to volunteer their time and energy if they will have the authority to make important decisions than if the process only involves rubber-stamping what the housing administrators have already decided. Also, tenant involvement will be more likely if their activities are not just directed at crime and fear of crime but at other matters affecting their quality of life.

While a detailed discussion of ways of facilitating resident involvement is beyond the scope of this review, there are a number of guides, including that published by the State of Illinois (Housing and Research Development, n.d.) which provide information on how to organize a tenants council and what role the council should play. Finally, consideration might be given to paying tenants or providing rent credits for their involvement in some activities. Rouse and Rubenstein (1978) tell of a group of residents who asked why poor people, who are already overburdened, are always the ones who are asked to volunteer.

7.4.4 Social Development Programs

Specific social development programs have been described in Chapter 5. It should be emphasized again that programs in parenting, early childhood education and employment should be part of any coordinated approach to crime prevention. In the long run, the best approach to the problem of crime will be to reduce the number of potential offenders. While very broad involvement of different levels of government and the private sector is desirable, some worthwhile steps can be taken by a local housing authority. For example, a day care program located in a housing development would make it easier for project residents to take training programs or to get a job. Early childhood education could be part of the mandate of the day care. Interestingly, Rosenbaum (1988) has observed that residents of low-income, heterogeneous areas often choose to establish programs directed at dealing with social problems rather than opportunity reduction, reflecting their view that crime is caused by local problems.

Residents could also be employed as part of a crime prevention initiative. Residents, including young people, could be hired to assist security personnel. Other paid services which might be performed by residents are proposed in the next section.

7.4.5 Services to Deal with Crime and to Assist Tenants

Many services can be offered which will help tenants to deal with crime and other problems. Victim\witness assistance programs are one obvious example. Many crime prevention strategies have awareness programs associated with them, and target hardening may involve the use of security surveys. All of these services could by offered or coordinated by a security coordinator employed by the housing authority. Because of the preponderance of female family heads, programs oriented toward women can be helpful. The Fredericton community police station found such programs to be valuable, and also provided educational sessions concerning matters like welfare rights and parenting skills. Unemployment rates among residents are often high, so facilitating employment is important. Job vacancies can be posted in buildings and Job Fairs sponsored for residents. Training in job-hunting skills may also be offered.

Public housing typically has a high proportion of children, so day care is needed. Recreational facilities and programming are required for older children, as facilities in the surrounding community may not be adequate. Finally, crisis intervention programs can be important to public housing tenants. Events such as a sick child or a cheque that is late, which might represent an inconvenience in a middle class family, could be a crisis to someone who is living close to the edge of subsistence.

Many of these services might be provided by residents on either a paid or voluntary basis. Neighbourhood Watch and citizen patrol programs cannot work without volunteers from the community. In the Cabrini-Green project in Chicago, residents were utilized as safety aides and employed in other security positions. They also worked in social services and counselling jobs. At one point, 74% of the security, management, and social services staff hired were residents of the project (Rouse and Rubenstein, 1978). This is a way of providing services, employing residents, and ensuring tenant participation in the operation of the project.

7.4.6 Enhanced Policing

Despite the need for police services in many public housing projects, these services may not be adequate. While the police will respond to calls for service, they may not normally do preventive patrol of housing projects because their design (high-rise or town-house complex) is such that they are not accessible to police in cars. Because of this, a number of strategies have been developed to improve the policing of public housing.

7.4.6.1 Police Mini-Stations

In Chapter 4, we discussed several programs in which the police established offices in public housing projects. These projects have been very successful, but may not be suitable in all places. Many housing projects are too small to justify setting up a community office. In other cases, the residents may not want an increased police presence. While we may sometimes assume that people want to have more contact with the police, some may view the police as a threat. For example, in some cities relationships between the police and racial minorities are not good and members of these minority groups may resent or be suspicious of police attempts to move closer to the community. Even in Fredericton, where police/community relations were good, many of the residents of the Devon project were afraid that the police intended to gather information for social assistance agencies. The first police officer assigned to the office had to put a great deal of effort into breaking down this mistrust.

In any case, the police should not move an office into a public housing project without first consulting with residents. Tenant associations and police departments should be encouraged to mutually agree on establishing police offices in projects where conditions warrant it.

A related issue is whether other agencies should be co-located with the police. NACRO (1989) has stated that if only the police utilize an office, that people will not stop by. In Fredericton, the office was staffed by a social worker on a part-time basis, and many other programs were run in the office. In other cities, the police felt that the presence of other groups would inhibit those who wanted to talk with the police. The resolution of this will depend on local circumstances as well as on considerations such as whether the police wish to emphasize social services or enforcement.

7.4.6.2 Relationships Between Housing Authority and Public Police

In most cases, the police will not establish offices in public housing projects. Thus it is necessary to find other ways to improve relationships between the police and the staff and residents of public housing. Hann et al (1989) have outlined the various roles which the public police can play in public housing:

- Response to calls for service as with any other part of the community. The nature of this response is important if tenants are to be encouraged to report crime and to cooperate in prevention programs.
- Special foot patrol on public housing sites.
- Police officers may work in public housing in their off-duty hours.
- Act as an agent of the landlord to enforce the Trespass to Property Act.
- Joint problem solving with staff and tenants.
- Special enforcement efforts such as drug sweeps.

Developing these functions requires a high degree of cooperation between police and housing authority officials. This requires liaison at all levels from the housing administrator and police chief down to the constable and caretaker. There are a number of actions both sides can take to facilitate such contacts. For example, a zone policing system gives police a sense of "ownership" over a geographical area and clearly indicates who is responsible for policing a particular housing project. On the other hand, the housing authority help to fulfil their responsibility for coordinating security by making an effort to contact the police and can facilitate police involvement by steps such as providing a workspace in a project and by providing site layout information to facilitate the police response to calls, and by responding to police concerns about matters such as lighting. Housing authority staff, who are familiar with their tenants, can also assist the police by providing them with information (Hann et al, 1989).

Where public housing projects have their own security staff or contract with private security, it is necessary that relationships be maintained with the public police because of their overlapping roles. The housing authority official responsible for security should ensure that housing security and the police are cooperating. It may even be possible for the police to so some training of security personnel to help minimize the police workload. A model for this is West Edmonton Mall, where the Edmonton police have trained mall security to process shoplifters and to fill out the forms required to process the offender. Much of this work had formerly been done by the police, after security personnel had apprehended an offender. In a public housing context, some of the paperwork for minor offenses might be completed prior to the arrival of the police.

7.4.7 Stronger Linkages with Other Agencies

Families living in public housing often require many types of help. Two different types of problems may arise in delivering these services. First, tenants may not come to the attention of social service agencies. People with poor educations who may also lack language skills may not know where to turn for help and may not make use of available services. Second, many families in public housing have multiple problems and many different agencies may be involved with one family. For example, one family may be a client of a welfare department, a child guidance clinic, a juvenile probation officer, and a public health nurse. Unless these services are coordinated, their effects may be limited.

There is a need in the first case for someone with knowledge of tenants' problems to arrange referrals. For this, a community worker in the housing project may be close enough to the residents to know when a tenant requires assistance. For the second problem, what is needed is for one person or one agency to coordinate the separate services. Again, a worker at the housing project would be in a good position to do this coordination. For social services, then, what is needed is the capacity to refer tenants to the proper agencies when they need assistance and to coordinate the activities of different agencies. Similar linkages could also be built with recreational officials and with representatives of the local business community.

In order to build these linkages, there must be some flexibility on the part of those funding public housing and on the part of outside agencies. Some local housing authorities have complained that they have not been able to adequately respond to resident and community needs because Federal-Provincial cost-sharing agreements restrict spending to shelter-related expenses (New Brunswick Housing Corporation, 1988). On the other hand, outside agencies may not feel their mandate requires them to assign people to work specifically in public housing. However, a serious attempt to deal with some of the problems of public housing might see the housing authority hiring a community worker to act as a social services coordinator or a social services agency putting one of its workers into a project to fill the same role. Business might obtain space within the project to carry out pre-employment training. A community might use the grounds of a public housing project to locate a hockey rink or swimming pool designed to serve the whole community. There is a great deal of potential if some of the barriers which have separated public housing from the rest of the community, and different groups from each other, can be broken down.

7.5 MTHA Security Delivery System Study

While it does not deal with incorporate all 7 elements discussed above, a recent report prepared by Robert Hann and his colleagues for the Metropolitan Toronto Housing Authority is a good example of how a coordinated security strategy based on problem analysis can be organized. The report outlines an improved security delivery system for MTHA. While this six-volume report is quite complex and detailed, the main points can be summarized here.

The report basically follows the problem-oriented planning model presented earlier in this report. Hann *et al* take the view that a security system should be tailored to its environment so they begin by looking at the types of problems faced by MTHA residents and administrators. They found that the most serious threats were: drug dealing; youth "hanging around"; vandalism; disturbances including noisy parties and fights; and false fire alarms. These conditions led residents to feel that they were not safe, that they lived in an environment where nobody cared what happened, and that they were treated like second class citizens.

The researchers also found that the magnitude of the problems varied greatly within the different MTHA sites and that the nature of the problems changed over time. Thus they began their work with the knowledge that any system they developed had to be flexible and that it had to be comprehensive enough to deal with a wide variety of problems and circumstances. A "one size fits all" approach to security cannot be effective under these conditions.

The security program which they recommend depends upon taking a proactive and preventive approach to security problems. The program would be under the direction of a Security Support Group within the MTHA administration. These staff would take over some of the functions now carried out by contract security, as well as having a security planning and management function. The program also makes use of a wide range of resources in security delivery, including contract security. Of particular interest is one of the principles stated by Hann and his colleagues which is that every employee and tenant should have an active concern with security matters and that everyone should have the opportunity to consult in the identification of problems and solutions. Employees should be held accountable for their actions in improving security. Employees from different departments must work together to integrate their activities to work toward the common goal of improving security. One challenge to Housing Authority staff is to communicate this philosophy to employees, and to encourage them to take concrete actions in support of security goals.

They also recommend flexibility in the use of private security. For example, different tasks require different levels of qualification (and different levels of cost) from a basic security guard to an off-duty police officer. Because of the cyclical or temporary nature some problems, short-term as well as continuing contracts should be used. They also suggest that funds might be better spent hiring personnel other than those trained specifically in security. For example, community development workers may be best able to organize tenant-based prevention programs and work in social development programs; recreation workers may provide programs for potential offenders and victims; and administration staff may be able to interact with tenants while providing a minimal level of security.

A number of steps can be taken to encourage tenant participation. These include working with existing tenants' associations and/or work groups; publicizing the new Security Delivery System as widely as possible; carrying out tenant surveys; and encouraging tenants to attend meetings and to interact with MTHC staff in order to build the linkages needed for a good security program. Organizers must keep in mind the circumstances of their tenants when arranging meetings. For example, if a project has a high proportion of single parents, provision of child care will help to ensure higher attendance.

In addition, Hann and his colleagues see the need for liaison with other agencies including the police, fire department, government planners, social assistance agencies, educational officials, parks and recreation authorities, and so on. The MTHA security department have to take the lead role in developing these relationships and have to ensure that the Housing Authority is responsive to the concerns of those who are asked to help with public housing problems.

7.6 Dealing with Drugs in Public Housing

The problem of drugs in public housing is a major one in the United States and is perceived to be becoming a problem in Canada. In this section, we will examine programs which have been instituted to try to address this problem.

7.6.1 The MHFA Initiative

This program has been developed by The Massachusetts Housing Finance Agency (MHFA). The work by MHFA involves many different agencies, and tries to deal with several problems simultaneously (White, 1989). The need for a multi-pronged strategy became obvious when MHFA financed the rehabilitation of 2,000 scattered units of assisted housing called the Granite projects. When these projects were purchased from HUD with financing from MHFA, they were in very poor condition. When the agency began talking with tenants about the planned renovations, they realized that the project would fail unless they dealt with the problems of crime and drugs as well as with physical changes.

In response, MHFA established a program to address the "crime, violence, and community disintegration brought on by illegal drug dealing" (White, 1989:2). The first step involved the creation of the Boston Inner City Task Force which had representation from a broad range of organizations including the police department, the Mayor's office, the Boston Affordable Housing Coalition, tenants from the Granite projects, the Boston Housing Partnership, Greater Boston Legal Services, HUD, private developers, clergy, and representatives of medical and social agencies.

The role of this Task Force was to look at the broad issue of community development, including the problems of crime and drugs. The range of groups involved in the Task Force made a coordinated response possible. Some of the actions taken by the Task Force include:

1. Increasing police patrols. The police strength in the area has been increased by 25 percent, foot patrols have been established, and a new police station has been opened in the area. As a result of this initiative, arrests increased substantially.

2. Improving links between the police and the community. MHFA hired a retired Police Superintendent to act as a liaison between police, residents, and the property owners and managers; to coordinate crime investigations; and to track results.

3. Improving the response of the criminal justice system. The State Drug Lab gives priority to analysis of drugs confiscated in the Granite area to reduce delays in prosecution. A judicial court subcommittee of the Task force has recommended several ways of speeding up the court process including assigning additional judges.

4. Developing procedures to evict troublesome tenants. With the assistance of Legal Services, a manual was produced which provided guidelines for evicting tenants who were involved in crime and other misconduct while ensuring that the rights of tenants were protected. Training was provided for owners and managers.

5. Establishing a Tenants Assistance Program. This program was initiated to help staff and tenants deal with drug and alcohol problems. As part of this program, access to community resources, social services, counselling, and training are provided to tenants and managers. The program is jointly funded by MHFA and the developers. Some of these costs are recouped through a reduction in property insurance rates provided by MHFA's insurance company.

6. Contracting with a private security company. To supplement police patrols, a contract was given to a neighbourhood-based security firm to patrol the buildings.

7. Carrying out security related physical improvements.

While no evaluation of the project is available, the MHFA is convinced that it is successful. MHFA feels this success is due to three factors:

1. A broad range of involvement from the agencies concerned with the problems of public housing residents. These include representatives of municipal government, housing authorities, the police, the courts, and agencies concerned with public health, mental health, and social services. Those involved with the Granite Properties project feel that the responsibility for organizing these efforts should fall upon the public agency providing management oversight of the project, typically the local housing authority.
2. Extensive tenant involvement. The entire planning process, from problem identification to implementation of solutions, must be done with tenant involvement.
3. Multiple efforts to deal directly with problems of crime and drugs. These efforts must range from increased law enforcement and eviction of tenants involved in drug dealing to the provision of counselling, treatment, and social services for residents. No lasting solution will be possible unless social development issues such as education and employment are also addressed.

7.6.2 The Oasis Project

A similar program in Fort Lauderdale, Florida also addressed the problem of a high crime neighbourhood with a high rate of drug use (Lindsey, et al, 1985). The problem addressed by the Fort Lauderdale Housing Authority was that of trying to bring about change in the sections of the city which had the poorest housing, highest crime rates, highest unemployment, and lowest income. The Housing Authority joined with the police to develop a program which would revitalize these areas. These two agencies already devoted substantial resources to slum neighbourhoods, but without much effect. The police made a large number of arrests, but criminals would soon be released and be back on the streets in their old communities. Housing officials would make improvements, but these improvements were usually short-lived. This cycle of ineffectiveness left law-abiding residents of the community living in substandard housing and at the mercy of the criminals who controlled the streets.

Using the what Lindsey called the Oasis Technique, police and housing officials work as a team in locations where crime and housing problems are clearly related and where there is a core of citizens to support the program. While the police are applying pressure on law violators, housing officials worked on upgrading housing and on other physical improvements. Citizen involvement was also important to the success of the program. In additional to traditional prevention programs such as Crimewatch and Crimestoppers, citizens were involved in many different ways. For example, regular meetings were held involving community residents, police, housing authority, City Department of Community Affairs, NAACP, the local business association, code enforcement personnel, landlords, and property owners. These meetings were intended both to identify problems and to suggest solutions.

The tactics used in the Oasis Technique are very broad, and not limited to traditional methods for dealing with the problem of crime. By attacking the problem in several different ways, small areas are revitalized. According to Lindsey and his colleagues, the improvement in conditions leads to an increase in property values which in turn triggers new investment by the private sector.

There are many benefits in addition to the increase in property values. Relationships between the police and the community are improved as the police have positive contacts with members of the community, rather than just meeting them when enforcing the law and as the citizens realize that the police are trying to help them to build a better community. Analysis of police calls for service showed that crime rates in the Oasis areas had declined and were substantially lower than in other similar areas of the city.

7.6.3 The P.E.R.F. Problem-Oriented Approach

The Police Executive Research Forum (PERF) is carrying out a project in five U.S. cities in which they are evaluating the problem-oriented approach to the drug problem. The program has the following objectives (Weisel, 1989):

- to increase the effectiveness of police in dealing with local drug problems by addressing the underlying community problems that give rise to them;
- to increase reliance on the knowledge and creative approaches of line officers to analyze problems and develop solutions;
- to encourage police to tap diverse public and private resources in a cooperative effort to solve community problems; and
- to develop a closer involvement with the public to see that police address the needs of citizens.

The cities of Atlanta, Tampa, Philadelphia, Tulsa, and San Diego are participating in the project. In four of these cities, areas with large public housing project have been targeted, and the programs will involve strategies including residents and managers of the projects.

While the projects are different in each city, the problem-oriented approach can be illustrated by describing the Tampa program. The project is targeted on College Hill Homes, which is a 710-unit public housing complex. An problem analysis indicated that the area had serious drug-related problems and that most of the activity was carried out by non-residents. To deal with this, the police began to strictly enforce trespassing laws and began a parking control program targeted at non-resident vehicles. Lease agreements were monitored to ensure that only people specified on the lease were actually living in the apartments.

While we must wait for evaluations of these attempts to deal with the problems of drugs and other crime in public housing projects, these initiatives all provide examples of a multi-faceted approach to crime prevention. Those who developed these programs have realized that difficult problems do not have simple solutions, and that the coordinated work of many different people and agencies are required to do anything about the problems of drugs and serious crime. The approach which we advocate, and which is illustrated in these programs, involves a planning process which begins with an analysis of problems. Those developing programs should design solutions to meet these problems rather than adopting off-the-shelf solutions. This planning process will be described in the next chapter.

8.0 CONCLUSIONS

As this review of crime prevention and urban safety in urban environments has shown, there are no simple solutions to crime. One reason for this is that the causes of crime are very complex. Whether we look at why individuals become deviant or at factors in the design of the physical environment which facilitate crime, we see that crime occurs for many different reasons.

The Need for a Planned Approach

Because the situations under which crime is likely to occur are varied, "off-the-shelf" remedies will not be successful. To have any chance of reducing crime and fear of crime, strategies must be developed through a systematic planning process beginning with a careful analysis of the problem. A planning and implementation model which can be used to systematically identify problems, match solutions to those problems, and evaluate the results is shown in Figure 2.

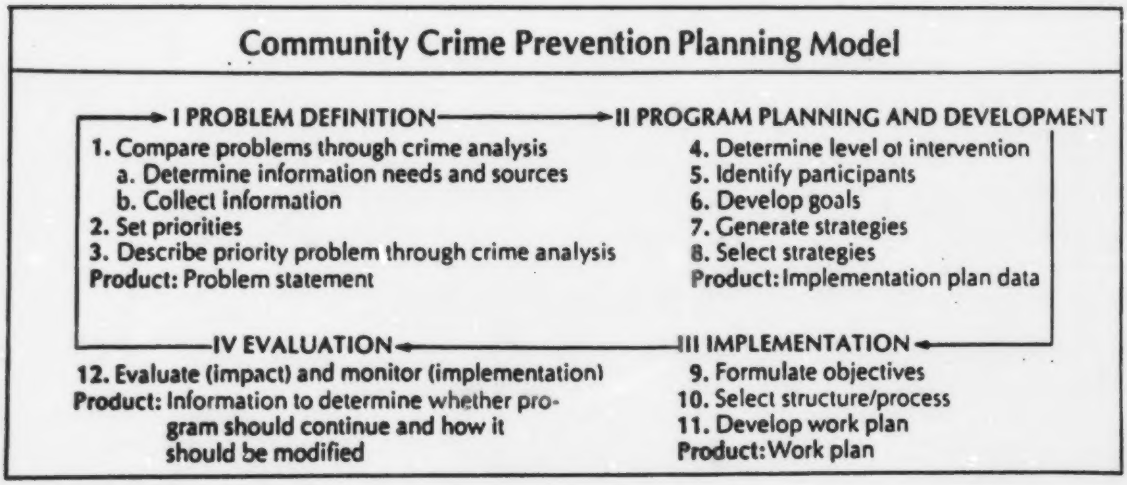
Community Crime Prevention Planning Model
I PROBLEM DEFINITION
1. Compare problems through crime analysis
a. Determine information needs and sources
b. Collect information
2. Set priorities
3. Describe priority problem through crime analysis
Product: Problem statement
II PROGRAM PLANNING AND DEVELOPMENT
4. Determine level of intervention
5. Identify participants
6. Develop goals
7. Generate strategies
8. Select strategies
Product: Implementation plan data
III IMPLEMENTATION
9. Formulate objectives
10. Select structure/process
11. Develop work plan
Product: Work plan
IV EVALUATION
12. Evaluate (impact) and monitor (implementation)
Product: Information to determine whether program should continue and how it should be modified

FIGURE 2

Problem Definition

This is the research stage. Crime statistics and consultation within the community are used to define crime problems in their community context, to establish priorities, and to describe the key aspects of these priority problems through detailed crime analysis. The result is a precise statement of the problem(s) to be addressed.

Program Planning and Development

This is the strategic planning phase. The planner develops a set of approaches most likely to be successful in addressing the problem as defined, including selecting potential participants, setting goals, establishing indicators of success, and choosing between alternative strategies. The product of this phase is the overall strategy to be used. The selection of strategies must be a creative exercise as there are many possibilities. A program might involve any or all of four major components: law enforcement (ie. directed patrol, surveillance); community participation (ie. Block Watch, Operation Identification); physical or environmental (ie. street lighting, target hardening); and administrative or legal (ie. city ordinances, special prosecutors for target crimes). It is important that solutions not be selected mechanically, but rather should be tailored to the specific problem which is being addressed.

Implementation

This is the action phase. Specific objectives are established, roles determined, necessary support obtained, and a work plan developed. Then action can proceed.

Evaluation

This is the assessment stage. On the completion of each component of the program strategy, there should be process and impact evaluations using success indicators and performance measures defined in the planning phase and monitored during the implementation phase. An evaluation will show whether conditions have changed as a result of the program. The reasons for the success or failure of part or all of a program, its efficiency compared with other activities, and any intended or unintended side effects can be demonstrated. In some cases the cost-effectiveness of a program can be determined. The success or failure of the initial strategy will help to determine the approach to be used in subsequent attempts to resolve the same or similar problems. Impact evaluation also introduces an element of accountability into the process, as those involved know that the results of their efforts will be measured.

Evaluation is particularly important at this stage in the development of crime prevention strategies. We know that crime prevention has potential, but a good deal more research is necessary before we can become more certain about which types of programs are likely to be successful under a given set of circumstances. This review has illustrated how important it is to provide further documentation of the types of programs which are effective in reducing crime.

A Comprehensive Approach to Crime Prevention

In discussing the planning model, we have noted the need for approaching the problem of crime using a comprehensive approach which often involves a wide range of different participants and strategies. While single strategies like

Neighbourhood Watch or Operation Identification may work well in middle-class communities facing a relatively minor burglary problem, these approaches should not be expected to have the same impact in heterogeneous high-crime neighbourhoods where problems are much more deep-seated. In addressing this issue, Rosenbaum has stated that:

> "From a social policy standpoint, the Neighbourhood Watch research suggests that community organizers face major obstacles when they seek to 'implant' informal social control by using a strategy that does not match the needs and problems of the local community and is based on assumptions about social relations that do not apply in that environment. Policy makers and funders should be cautious about prepackaged programs and should recognize the importance of interventions that are tailored to the needs of the local community (1988:378).

What is required in these neighbourhoods are programs that are comprehensive and situation specific. A review of the many of the successful programs described in this report shows the need for such comprehensive programs:

* The Seattle Community Crime Prevention Program did not only involve Block Watch, but also security inspection and target hardening, property marking, and public education.

* In Portage la Prairie, Operation Identification and Operation Provident were supplemented with increased police patrols and more intensive burglary investigations.

* The successes of Hartford and Portland show the need to supplement environmental design changes with police and community action.

- Police-based strategies such as random preventive patrol and rapid response to calls for service do not appear to have had an impact on crime rates while community-based strategies, including establishing mini-stations in public housing projects, have accomplished at least modest reductions in crime. These community-based programs typically involve a combination of many different activities.

- While data on the impact of primary prevention programs is scarce, we do know that any successful programs will have to be very intensive. For example, the Perry Preschool Project involved both preschool attendance by children and home visits by teachers. The New Pride program for adolescents included the establishment of an alternative school, vocational training, assistance in finding jobs, and counselling for family members as well as for youth in the program.

- The recent European initiatives, such as that in France, involved a coordinated national effort under the umbrella of a national council which facilitates activities at the municipal and community levels.

- The Priority Estates Project, which was successful in reducing crime on a number of British housing estates, involved a number of different initiatives including improving repair of units, reducing the number of empty units by renting them more quickly, providing night watchmen, changing resident allocation policies, improving police services, and encouraging residents to participate in estate management.

- In their study of Metro Toronto Housing Authority projects, Hann and his colleagues found that the projects with the best records had staff who took a problem-oriented approach and who worked as a team while responding to these problems.

- The crime and drug initiatives in Boston and Fort Lauderdale involved task forces made up of representatives of a very broad group of groups and agencies.

This is not to say that some programs using only a single strategy cannot work. For example, the exact change system on buses has been very successful in reducing bus robberies. Similarly, police actions which result in the arrest of a repeat offender may reduce the crime threat in a particular area. However, such changes will not come close to eliminating most of the crime in a community and some may only lead to displacement of criminal activity.

The Future of Crime Prevention in Canada

There are thousands of crime prevention initiatives taking place in Canada. This review suggests that much of this effort is wasted and will have little impact on crime. While a great deal can be done at the community, municipal, and provincial levels, more could be accomplished if we were to follow the lead of many European countries and adopt a national strategy for crime prevention. Because of the need for coordination, it will be necessary for the federal government to take a lead role in this strategy. An inter-ministry federal council, mandated to work with the provinces, could develop and coordinate policies, and could provide both information and funding to support crime prevention. This council could monitor crime prevention initiatives among federal departments, provide contract funding to provincial and municipal governments, and support model projects. A similar provincial body could act as a liaison between federal and municipal governments. Municipal crime prevention councils would involve local governments and organizations which are directly involved in service delivery such as police, social agencies, and school boards.

At each of these levels, there should be an emphasis on the involvement of the private sector. Also, local communities must have a great deal of say in defining progblems, selecting strategies, and implementing programs.

A recent study by Hastings and Melchers (1990) has shown that we still have a long way to go in developing a coordinated crime prevention strategy in Canada, In a survey of Canadian municipalities, they found that while there is a high level of involvement of municipal governments in the area of crime prevention, these activities are largely limited to those initiated by the police and very few involve efforts at crime prevention through social development. Clearly, this research demonstrates the need for senior levels of government, and for organizations such as the Federation of Canadian Municipalities, to provide leadership, information, and funding to local governments if there is be an effective response to Canada's crime problems.

APPENDIX 1

Methodology For An Integrative Review

A1. Methodology

Introduction

Our approach to synthesizing the literature was to present an "integrative review." The purpose of such reviews is to develop generalizations (qualitative and/or qualitative) on the basis of the body of the literature. Systematic gathering of the literature to be reviewed (data collection), designing and applying a standardized coding to articles and other material identified in the review, empirically and qualitatively analyzing and finally, interpreting the data constitutes the general technique referred to as "meta-analysis". A full formal meta-analysis was initially considered for key subsets of the literature. This technique is appropriate when integrating a large and diverse volume of research in a specific discipline where methods and measures have been refined over several years. However, we found that this formal analysis could not be carried out. Measures were inconsistent, methods changed from study to study and units of analysis fluctuated. For example, in the analysis of the spatial distribution of crime, units of analysis included census tracts, neighbourhoods (as defined by the author), and households/dwellings. Methods varied and included regression, comparison of means, and factor analysis. The outcome or dependent variable used several different types of crime including vandalism and burglaries. In summary, it is not possible to cumulate this diversity which is the hallmark of formal meta-analysis.

As a second example, victimization surveys have been conducted by a number of organizations and researchers. To perform a formal meta-analysis of this segment of the literature requires that each article report sample size, response rate, overall variance and means for each question, and most importantly, that the questions used to measure "fear of crime" and other key concepts in victimization be close to one another. In fact, many surveys were incompletely reported and the key questions used to measure fear of crime varied considerably.

As an alternative to formal meta-analysis, we applied structured coding to collect summary information on each article, report or book. This contributed to concise overview of the current state of the research, the substantive and empirical findings, and the main conclusions emerging from this research.

A Qualitative Approach

The approach adopted in this review primarily used a qualitative technique. Our original hope to use formal statistical procedures (meta-analysis) to combine the results of several empirical studies was stymied for several reasons:

- First, while certain themes, such as fear of crime or the spatial patterns of crime, have been investigated empirically within these themes there is great diversity of methods and measures. The application of a statistical technique to combine information from several public surveys requires more consistency of approach than is present in this literature.

- Also, there are too few research reports which fully report on data collection, variable definition and sampling to allow any statistical aggregation of results. Often refusal rates are omitted and other key aspects of statistical quality control are frequently lacking.

- Finally, within a specific area where quantitative research may have been undertaken, there are relatively few studies, making any inference weak and suspect.

In view of these problems we elected use qualitative methods. A key problem in any review is bias. A single researcher will often imbue other articles with a particular interpretation and select aspects of the literature to buttress a specific perspective. Our approach to balancing the literature consisted of the following steps:

1. Identification of Key Words

In consultation with the client we developed a comprehensive set of key words which described the main elements of the literature. This listing served not only as the basis for the formal scan of the literature, but also ensured that key aspects of the field were adequately described. Often several words may describe a particular phenomenon, and it is important to include all.

2. Comprehensive Literature Search

We employed the computer search facilities of the University of Manitoba to scan all relevant data bases. A professional librarian was engaged to assist with the identification of key information sources. As literature was identified, it was secured through interlibrary loan and through direct solicitation, if it was not readily on hand. We also consulted the Canadian Home Information Centre and wrote to many foreign jurisdictions in an effort to ensure that our perspective was complete and balanced.

3. Coding the Literature

A critical step was to code each article as it was accessed. Some material such as pamphlets from programs was noted and not examined in detail since our focus was on information which would allow qualitative assessment of the state of the art. A detailed coding form was used to catalogue each article, research report, monograph and book. In addition, each article was summarized by a research associate to provide an capsule commentary on the literature. An appendix contains these commentaries for the material used to prepare this literature review.

4. Integrating the Commentaries

The review was drafted by several writers who consulted the original articles, and the commentaries. In this way multiple perspectives were used in assembling the material. The final document was edited to integrate the main sections.

This approach to the literature review was intended to provide a high degree of balance to the appraisal of the field of urban safety. In this way the state of the art may be fairly represented.

A2 Synopsis of the Literature

The coding form used to summarize each article is shown below. It is possible to tabulate the literature to provide an overview of where the emphasis was been in urban safety.

Table A1
Types of Publication Consulted

Article (Academic)	152
Newspaper/Magazine	16
Newsletter	2
Book	77
Government/NGO Report	84
Unpublished Reports	17
Misc.	3
	351

The distribution of literature is overwhelmingly academic articles and books, followed by government reports. These reports are frequently non evaluative and are often handbooks and manuals prepared by consultants. These include design manuals for crime prevention and community oriented documents explaining how to initiate a neighbourhood watch.

As shown in Table A2, most of the accessible research has been undertaken in the United States. We consulted Canadian sources, but many of these articles have not provided the clear evaluative perspective needed to assess effective measures for urban safety.

Table A2
Country of Publication
(Percent)

Canada	11.6
United States	67.5
Other	20.9

Much of the research in countries other than Canada or the United States is concentrated in England with its tradition of crime prevention. The British Home Office in particular has been an active sponsor of research in the area of urban safety.

The problems in developing a formal meta-analysis may be seen in the distribution of articles by field and method. Forty-seven percent of all citations were classed as descriptive, which meant there was no theoretical foundation nor tested theory. For example, many of the neighbourhood design manuals prepared by consultants are completely descriptive.

Of the 351 items examined, 77 contained some theoretical orientation with almost a third of those approaching the subject from a purely theoretical perspective. There was an even split between quantitative and qualitative items (including pure description).

Table A3 shows the types of quantitative analyses (measurement method for basic concepts) which were presented by the literature. Many studies used several approaches to empirical testing and description which accounts for the multiple counts on method.

Table A3
Types of Quantitative Analysis
Numbers of Articles

Survey	78
File Review (housing, soc services)	77
File Review (Police/Justice)	70
File Review (Other)	42
Interview (Structured)	62
Interview (Unstructured)	4

(Note: More than one type of quantitative analysis may be included within any given study.)

It is interesting to note the number of studies which used file reviews to test theories. In many cases these were crime reports. One challenge in for an integrative survey is compare and aggregate results from different jurisdictions. Often administrative files provide little commonality and this can make studies quite unique and comparisons difficult.

Qualitative methodologies were also common methods for evaluating theory. The most common approaches were key informant interviews and participant observation. It is surprising that such common qualitative techniques as focus groups or expert panels were not used in any of the studies.

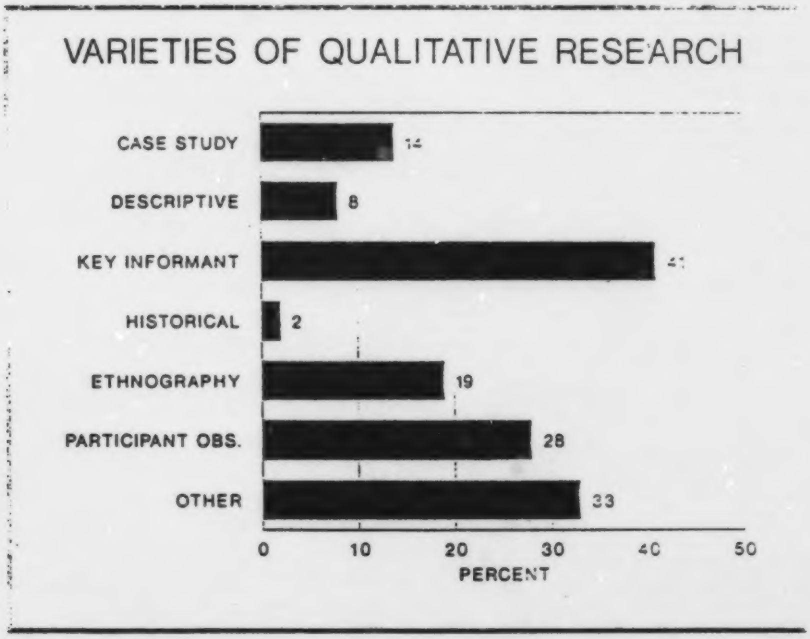

FIGURE A1

The research design employed (as opposed to the basic measurement techniques) was overwhelmingly quasi-experimental. Only 9 longitudinal or follow-up studies were evaluated. In some cases, some follow-up was reported, but usually its description is vague. For example, in environmental design, several studies reported that crime rates initially declined and then increased after certain physical changes were introduced. This discursive approach does not really count as a "follow-up" study.

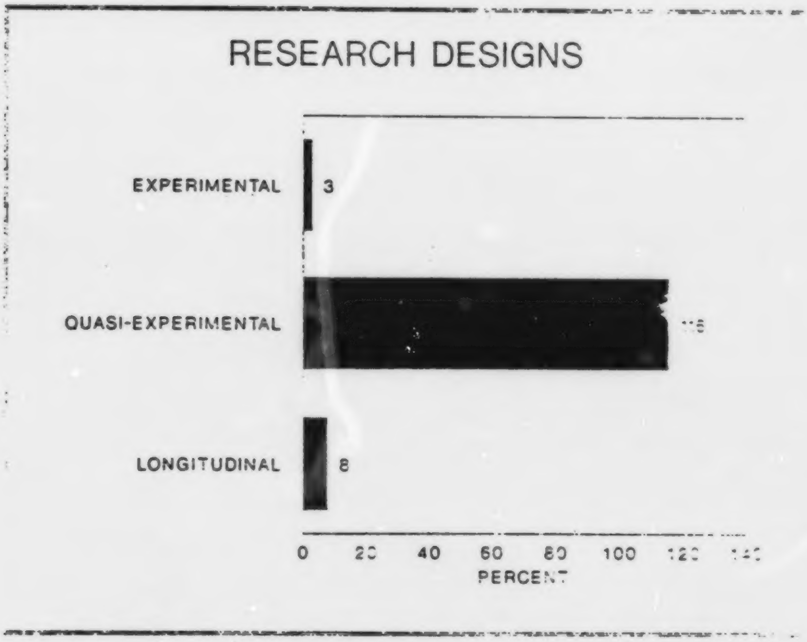

FIGURE A2

Half the empirical studies used original data in the form of interviews, surveys or direct observation, about a third used secondary sources, and the remaining third used combined both types of data. Most quantitative studies also used at least bivariate and sometimes multivariate analysis.

Much of the literature is policy oriented. The various themes are shown in Table A4. Many of these articles contained descriptions and case study material. Relatively few are evaluative.

Table A4
Policy Themes
(Number of Items)

Physical Design	76
Repair/Remediation	67
Management (Neighbourhoods)	120
Community Design	47
Social Environment	130

(Note: Many articles presented more than one theme)

The setting for the literature tends to more or less equal between urban and suburban. As shown in Figure A3, almost a third dealt with social housing.

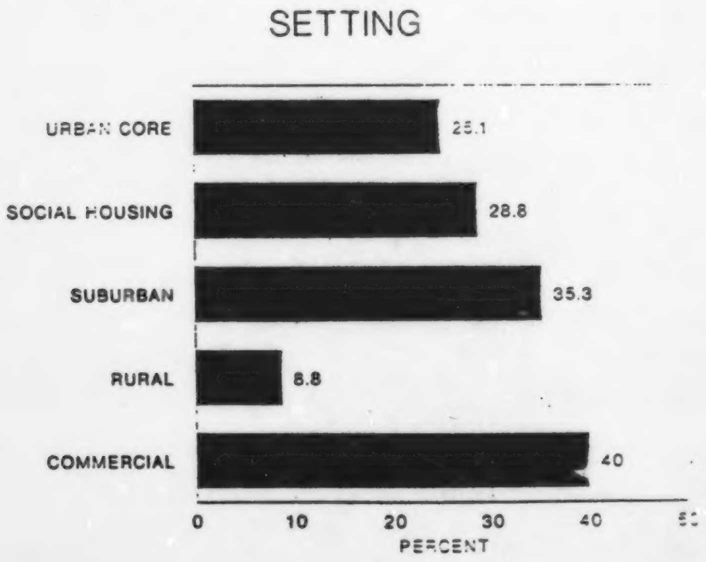

FIGURE A3

The spatial unit of analysis also reflects the diversity of the field. Most items used municipalities (cities, towns, etc.) as the unit of analysis and only five actually focused on a single dwelling unit. National and regional comparisons account for a relatively large segment of the research.

Table A5
Unit of Analysis
(Numbers of Items)

National/Regional	68
City/Municipality	91
Neighbourhood	61
Residential Complex	18
Single Unit	5

(Note: Almost a third of the items reviewed specified no spatial unit of analysis. Some of the citations in this table also had multiple units of analysis)

Urban safety comprises a diverse set of concepts. Table A6 shows the particular crimes and events which were considered in the literature.

Table A6
Urban Safety Themes in the Literature

Personal Crimes	85
Property Crimes	135
Nuisance Law	12
Drug Related Issues	9
Youth Problems	17
General (Multiple)	122
Other	7

(Note: Items may address more than on crime - some articles reviewed were unspecific on crime type)

The final coding undertaken of the literature was a reliability rating based on the level of reporting in the report or article. Articles which do not specify sample size, response rates, or adequately explain any basis for conclusions are rated as having low reliability. Many descriptions allege effects or report on a single case, especially with respect to the efficacy of community organizing or changes to the physical design of homes. These were judged to have low reliability since there is no way to corroborate findings.

Table A7
Reliability of the Literature
(Numbers of Items)

High	78
Medium	108
Low	162
Unrated	3
	336

A3. Summary

This integrative review has attempted to present a balanced perspective on urban safety. This approach included careful deliberation of the key words used in the computer search, multiple reviews of key articles and a coding of the literature to provide an overview of the current directions of inquiry. The coding of the literature illustrates the great diversity which exists within this field.

APPENDIX 2

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